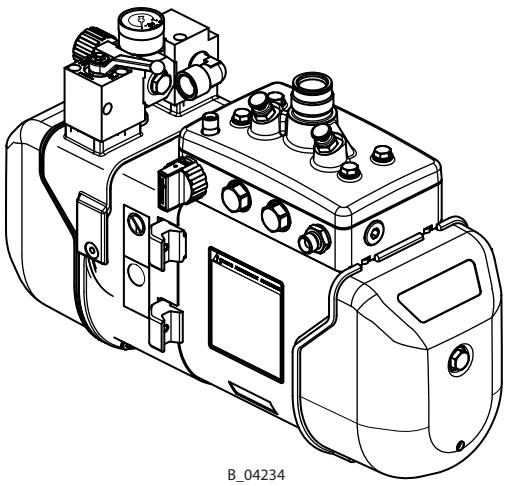
WAGNER

Translation of the Original Operating Manual

Cobra 40-10

Version 10/2013

High-pressure Double Diaphragm Pumps



B_04234

CE Ex II 2G IIB c X

Table of Contents

1	**ABOUT THIS OPERATING MANUAL**	**5**
1.1	Preface	5
1.2	Warnings, Notices, and Symbols in this Operating Manual	5
1.3	Languages	6
1.4	Abbreviations in the Text	6
2	**CORRECT USE**	**7**
2.1	Device Types	7
2.2	Type of Use	7
2.3	Use in an Explosion Hazard Area	7
2.4	Safety Parameters	7
2.5	Processible Working Materials	8
2.5.1	Recommended Application Areas	8
2.6	Reasonably Foreseeable Misuse	9
2.7	Residual Risks	9
3	**IDENTIFICATION**	**10**
3.1	Explosion Protection Identification	10
3.2	Identification X	10
4	**GENERAL SAFETY INSTRUCTIONS**	**11**
4.1	Safety Instructions for the Operator	11
4.1.1	Electrical Equipment	11
4.1.2	Staff Qualifications	11
4.1.3	Safe Work Environment	11
4.2	Safety Instructions for Staff	12
4.2.1	Safe Handling of WAGNER Spray Devices	12
4.2.2	Grounding the Device	13
4.2.3	Product Hoses	13
4.2.4	Cleaning	14
4.2.5	Handling Hazardous Liquids, Lacquers and Paints	14
4.2.6	Touching Hot Surfaces	14
4.3	Use in Areas Subject to Explosion Hazards	15
4.3.1	Safety Regulations	15
4.3.2	Operation without Fluid	16
5	**DESCRIPTION**	**17**
5.1	Scope of Delivery	17
5.2	Data	17
5.2.1	Materials of Paint-wetted Parts	17
5.2.2	Technical Data	17
5.2.3	Measurements and Connections	19
5.2.4	Volume Flow	20
5.2.5	Performance Diagrams	20
5.3	Function	22
5.3.1	Pump	22
5.3.2	Pressure Regulator Unit for Cobra	24

Table of Contents

6	**ASSEMBLY AND COMMISSIONING**	**25**
6.1	Installation and Connection	25
6.1.1	Installing the Pump	25
6.1.2	Grounding	26
6.2	Commissioning	28
6.2.1	Safety Instructions	28
6.2.2	Basic Flushing	31
6.2.3	Filling with Working Material	32
7	**OPERATION**	**33**
7.1	Spraying	33
7.2	Work Interruption	33
7.3	Decommissioning and Cleaning	34
7.4	Long-term Storage	34
8	**TROUBLESHOOTING, MAINTENANCE, AND REPAIR**	**35**
8.1	Troubleshooting and Rectification	35
9	**MAINTENANCE**	**37**
9.3	Hydraulic Stage Maintenance	38
9.3.1	Checking the Oil Level	38
9.3.2	Changing the Oil	39
10	**ACCESSORIES**	**42**
10.1	Cobra 40-10 Accessories	42
11	**SPARE PARTS**	**44**
11.1	How Can Spare Parts Be Ordered?	44
11.2	Overview of the Cobra 40-10 Components	45
11.3	Cobra 40-10 Air Motor	46
11.4	Cobra 40-10 Fluid Section	50
11.9	Cobra 40-10 Inlet Valve	54
11.10	Inlet Valve Depressor	54
11.11	Relief Valve	55
11.12	Cobra 40-10 Frame, Complete	56
11.13	Hopper, Complete	56
11.14	Trolley	57
11.16	Small Quantity Cup	58
12	**3+2 YEARS GUARANTEE FOR PROFESSIONAL FINISHING**	**59**
12.1	Scope of Guarantee	59
12.2	Guarantee Period and Registration	59
12.3	Handling	59
12.4	Exclusion of Guarantee	60
12.5	Additional Regulations	60
12.3	CE Declaration of Conformity	61

1 ABOUT THIS OPERATING MANUAL

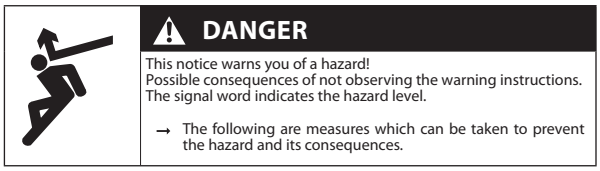
1.1 PREFACE

The operating manual contains information about safely operating, maintaining, cleaning and repairing the device.
The operating manual is part of the device and must be available to operating and service staff.
Operating and service staff should be instructed according to the safety instructions.
The device may only be operated in compliance with this operating manual.
This equipment can be dangerous if it is not operated according to the instructions in this operating manual.

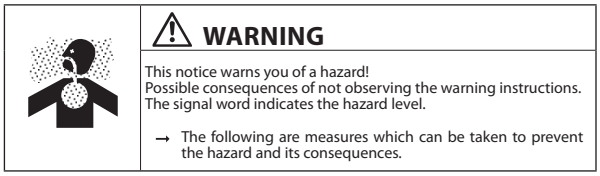
1.2 WARNINGS, NOTICES, AND SYMBOLS IN THIS OPERATING MANUAL

Warning instructions in this operating manual highlight particular dangers to users and to the device and state measures for avoiding the hazard. These warning instructions fall into the following categories:

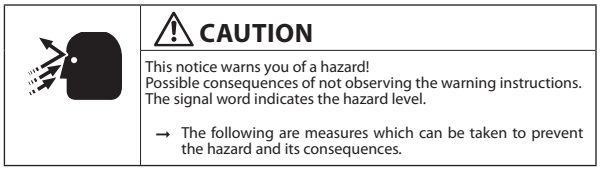
Danger - immediate risk of danger.
Non-observance will result in death or serious injury.


DANGER
This notice warns you of a hazard!
Possible consequences of not observing the warning instructions.
The signal word indicates the hazard level.
→ The following are measures which can be taken to prevent the hazard and its consequences.

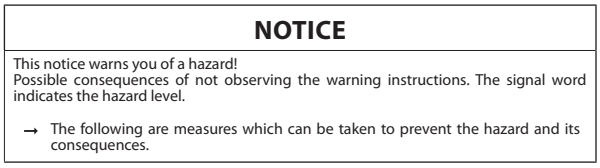
Warning - possible imminent danger.
Non-observance may result in death or serious injury.


WARNING
This notice warns you of a hazard!
Possible consequences of not observing the warning instructions.
The signal word indicates the hazard level.
→ The following are measures which can be taken to prevent the hazard and its consequences.

Caution - a possibly hazardous situation.
Non-observance may result in minor injury.


CAUTION
This notice warns you of a hazard!
Possible consequences of not observing the warning instructions.
The signal word indicates the hazard level.
→ The following are measures which can be taken to prevent the hazard and its consequences.

Notice - a possibly hazardous situation.
Non-observance may result in material damage.


NOTICE
This notice warns you of a hazard!
Possible consequences of not observing the warning instructions. The signal word indicates the hazard level.
→ The following are measures which can be taken to prevent the hazard and its consequences.

Note - provides information about particular characteristics and how to proceed.

1.3 LANGUAGES

The operating manual is available in the following languages:

Language	Order No.	Language	Order No.
German	2303152	English	2303675
French	2303676	Dutch	2303677
Italian	2303678	Spanish	2303679
Danish	2303680	Swedish	2303682
Portuguese	2343519		

1.4 ABBREVIATIONS IN THE TEXT

Stk	Number of pieces
Pos	Position
K	Marking in the spare parts lists
Order No.	Order number
DH	Double stroke
SSt	Stainless steel
2K	Two components

2 CORRECT USE

2.1 DEVICE TYPES

Double diaphragm pump and spray pack:

Cobra 40-10

2.2 TYPE OF USE

The device is suitable for processing liquid materials like paints and lacquers in accordance with the classification into explosion classes IIA or IIB.

2.3 USE IN AN EXPLOSION HAZARD AREA

The double diaphragm pump can be employed in explosion hazard areas (Zone 1).

2.4 SAFETY PARAMETERS

WAGNER accepts no liability for any damage arising from incorrect use.

- → Use the device only to work with the products recommended by WAGNER.
- → Only operate the device as a whole.
- → Do not deactivate safety fixtures.
- → Use only WAGNER original spare parts and accessories.

The double diaphragm pump may only be operated under the following conditions:

- → The operating staff must be trained on the basis of this operating manual.
- → The safety regulations listed in this operating manual must be observed.
- → The operating, maintenance, and repair information in this operating manual must be observed.
- → The statutory requirements and accident prevention regulation standards in the country of use must be observed.

2.5 PROCESSIBLE WORKING MATERIALS

→ Fluid products such as paints and lacquers.

Application	Cobra 40-10
Water-dilutable products	↗
Solvent-based lacquers and paints	↗
Two-component coating products	↗
Emulsions	↗
UV lacquers	↗
Primers	→
Epoxy and polyurethane lacquers, phenolic lacquers	↗
Liquid plastics	→
Wax-based underside protection	↗
Shear-sensitive lacquers	↗

Legend
↗ recommended ➟ limited suitability ↘ less suitable

NOTICE

Abrasive working materials and pigments!
Greater wear of parts carrying the product.

→ Use the application-oriented model (flow rate/cycle, product, valves, etc.) as indicated in Chapter 5.2.2.
→ Check if the fluids and solvents used are compatible with the pump construction materials as indicated in Chapter 5.2.1.

2.5.1 RECOMMENDED APPLICATION AREAS

Application	Cobra 40-10
Furniture industry	↗
Kitchen manufacturers	↗
Joinery	↗
Window factories	→
Steel-processing industry	→
Construction of vehicles	↗
Shipbuilding	↘

Legend
↗ recommended ➟ limited suitability ↘ less suitable

2.6 REASONABLY FORESEEABLE MISUSE

The following is prohibited:
- → coating work pieces which are not grounded,
- → unauthorized conversions and modifications to the double diaphragm pump,
- → processing dry or similar coating products, and
- → using defective components, spare parts, or accessories other than those described in Chapter 10 of this operating manual.

The forms of misuse listed below may result in health issues and/or material damage:
- → use of powder as coating product and
- → incorrectly set values for processing.

Wagner double diaphragm pumps are not designed for pumping food.

2.7 RESIDUAL RISKS

Residual risks are risks which cannot be excluded even in the event of correct use.
If necessary, warning and prohibition signs at the relevant points of risk indicate residual risks.

Residual risk	Source	Consequences	Specific measures	Lifecycle phase
Skin contact with lacquers and cleaning agents	Handling of lacquers and cleaning agents	Skin irritations, allergies	Wear protective clothing, observe safety data sheets	Operation, maintenance, disassembly
Paint in air outside the defined working area	Painting outside the defined working area	Inhalation of substances which are hazardous to health	Observe working and operating instructions	Operation, maintenance

3 IDENTIFICATION

3.1 EXPLOSION PROTECTION IDENTIFICATION

As defined in Directive 94/9/EC (ATEX 95), the device is suitable for use in potentially explosive areas.

II 2G IIB c X

CE:	European Communities
Ex:	Symbol for explosion protection
II:	Device class II
2:	Category 2 (Zone 1)
G:	Ex-atmosphere gas
IIB:	Explosion group
c:	Constructional safety
X:	Special Notes (see Chapter 3.2)

3.2 IDENTIFICATION X

X The maximum surface temperature corresponds to the permissible product temperature. This and the permissible ambient temperature can be found in the "Technical Data" chapter.

Maximum surface temperature

→ The maximum surface temperature of the pump depends on the operating conditions (heated product) and not on the device (frictional heat).

Ignition temperature of the coating product

→ Ensure that the ignition temperature of the coating product is above the maximum surface temperature.

Ambient temperature

→ The permissible ambient temperature is: +10 °C to +60 °C; +50 °C to 140 °F.

Medium supporting atomizing

→ To atomize the product, use only weakly oxidizing gases, e.g. air.

4 GENERAL SAFETY INSTRUCTIONS

4.1 SAFETY INSTRUCTIONS FOR THE OPERATOR

→ Keep this operating manual to hand near the device at all times.
→ Always follow local regulations concerning occupational safety and accident prevention.

4.1.1 ELECTRICAL EQUIPMENT

Electrical devices and equipment
→ To be provided in accordance with the local safety requirements with regard to the operating mode and ambient influences.
→ May only be maintained by skilled electricians or under their supervision.
→ Must be operated in accordance with the safety regulations and electrotechnical regulations.
→ Must be repaired immediately in the event of problems.
→ Must be decommissioned if they pose a hazard.
→ Must be de-energized before work is commenced on active parts. Inform staff about planned work. Observe electrical safety regulations.

4.1.2 STAFF QUALIFICATIONS

→ Ensure that the device is operated and repaired only by trained persons.

4.1.3 SAFE WORK ENVIRONMENT

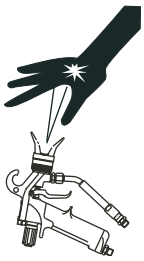
→ Ensure that the floor in the working area is static dissipative in accordance with EN 61340-4-1 (resistance must not exceed 100 MOhm).
→ Ensure that all persons within the working area wear static dissipative shoes. Footwear must comply with EN 20344. The measured insulation resistance must not exceed 100 Mohm.
→ Ensure that during spraying, persons wear static dissipative gloves. The grounding takes place via the spray gun handle.
→ If protective clothing is worn, including gloves, it has to comply with EN 1149-5. The measured insulation resistance must not exceed 100 Mohm.
→ Paint mist extraction systems must be fitted on site according to local regulations.
→ Ensure that the following components of a safe working environment are available:
– Product/air hoses adapted to the working pressure.
– Personal safety equipment (breathing and skin protection).
→ Ensure that there are no ignition sources such as naked flames, sparks, glowing wires, or hot surfaces in the vicinity. Do not smoke.

4.2 SAFETY INSTRUCTIONS FOR STAFF

→ Always follow the information in these instructions, particularly the general safety instructions and the warning instructions.
→ Always follow local regulations concerning occupational safety and accident prevention.

4.2.1 SAFE HANDLING OF WAGNER SPRAY DEVICES

The spray jet is under pressure and can cause dangerous injuries.
Avoid injection of paint or cleaning agents:



→ Never point the spray gun at people.
→ Never reach into the spray jet.
→ Before all work on the device, in the event of work interruptions and functional faults:
  – Switch off the energy/compressed air supply.
  – Relieve the pressure from the spray gun and device.
  – Secure the spray gun against actuation.
  – In the event of functional faults: remedy the fault as described in the "Troubleshooting" chapter.
→ The liquid ejection devices are to be checked for safe working conditions by an expert (e.g. Wagner Service Technician) as often as necessary or at least every 12 months, in accordance with the guidelines for liquid emitters (ZH 1/406 and BGR 500 Part 2 Chapter 2.36).
  – For devices that have been shut down, the inspection can be postponed until the next commissioning.
→ Carry out the work steps as described in the "Pressure Relief/Work Interruptions" chapter:
  – if pressure relief is required.
  – if the spraying work is interrupted or stopped.
  – before the device is cleaned on the outside, checked, or serviced.
  – before the spray nozzle is installed or cleaned.

In the event of skin injuries caused by paint or cleaning agents:
→ Note down the paint or cleaning agent that you have been using.
→ Consult a doctor immediately.

Avoid danger of injury through recoil forces:
→ Ensure that you have firm footing when operating the spray gun.
→ Only hold the spray gun briefly in a position.

4.2.2 GROUNDING THE DEVICE

In order to avoid electrostatic charging of the device, the device must be grounded.
Friction, flowing liquids, and air or electrostatic coating processes create charges. Flames or sparks can form during discharge.

- → Ensure that the device is grounded for every spraying operation.
- → Ground the work pieces to be coated.
- → Ensure that all persons inside the working area are grounded, e.g. that they are wearing static dissipative shoes.
- → Wear dissipative gloves when spraying. The grounding takes place via the spray gun handle.

4.2.3 PRODUCT HOSES

- → Ensure that the hose material is chemically resistant to the sprayed products.
- → Ensure that the product hose is suitable for the pressure generated in the device.
- → Ensure that the following information can be seen on the high-pressure hose:
  - – Manufacturer
  - – Permissible operating overpressure
  - – Date of manufacture
- → Make sure that the hoses are laid only in suitable places. In no case, should hoses be laid in the following places:
  - – in high-traffic areas,
  - – on sharp edges,
  - – on moving parts, or
  - – on hot surfaces
- → Make sure that the hoses are never used to pull or move the device.
- → The electrical resistance of the complete high-pressure hose must be less than 1 Mohm.

Several liquids have a high expansion coefficient. In some cases their volume can rise with consequent damage to pipes, fittings, etc. and cause fluid leakage.
When the pump sucks liquid from a closed tank, ensure that air or suitable gas can enter the tank to avoid a vacuum being generated in the tank itself. Thus a negative pressure is avoided. The vacuum could implode the tank (squeeze) and can cause it to break. The tank would leak and the liquid would flow out.
The pressure created by the pump is a multiplication of the inlet air pressure.

4.2.4 CLEANING

→ De-energize the device electrically.
→ Disconnect the pneumatic supply line.
→ Relieve the pressure from the device.
→ Ensure that the flash point of the cleaning agent is at least 5 K above the ambient temperature.
→ To clean, use cloths and brushes moistened with solvent. Never use hard objects or spray on cleaning agents with a gun.
→ Preferably, non-combustible cleaning agents should be used.

An explosive gas/air mixture forms in closed tanks.
→ When cleaning devices with solvents, never spray into a closed tank.
→ Only use electrically conductive tanks for cleaning liquids.
→ The tanks must be grounded.

4.2.5 HANDLING HAZARDOUS LIQUIDS, LACQUERS AND PAINTS

→ When preparing or working with lacquer and when cleaning the device, follow the working instructions of the manufacturer of the lacquers, solvents and cleaning agents being used.
→ Take the specified protective measures; in particular, make sure that you wear safety goggles, protective clothing, and gloves, as well as skin protection cream if necessary.
→ Use a mask or a breathing apparatus if necessary.
→ For sufficient health and environmental safety: operate the device in a spray booth or on a spraying wall with the ventilation (extraction) switched on.
→ Wear suitable protective clothing when working with hot products.

4.2.6 TOUCHING HOT SURFACES

→ Only touch hot surfaces if you are wearing protective gloves.
→ When operating the device with a coating product with a temperature of > 43 °C; 109.4 °F:
- Identify the device with a warning label "Warning - hot surface".

Order No.	
9998910	Instruction label
9998911	Protection sticker

Note: Order the two stickers together.

4.3 USE IN AREAS SUBJECT TO EXPLOSION HAZARDS

The pneumatic pump may be used in potentially explosive areas. The following safety regulations must be observed and followed.

4.3.1 SAFETY REGULATIONS

Safe handling of WAGNER spray devices

Mechanical sparks can form if the device comes into contact with metal.
In an explosive atmosphere:
→ Do not knock or push the device against steel or rusty iron.
→ Do not drop the device.
→ Only use tools that are made of a permitted material.

Ignition temperature of the pumped product
→ Check that the ignition temperature of the pumped product is higher than the max. allowable surface temperature.

Medium supporting atomizing
→ To atomize the product, use only weakly oxidizing gases, e.g. air.

Surface spraying, electrostatics
→ Do not spray device parts using electrostatic equipment.

Cleaning
If there are deposits on the surfaces, the device may form electrostatic charges. Flames or sparks can form during discharge.
→ Remove deposits from the surfaces to maintain conductivity.
→ Only use a damp cloth to clean the device.

4.3.2 OPERATION WITHOUT FLUID

Avoid running the pump so that it sucks in air (without fluid inside). The air, combined with the vapor of flammable fluids, can generate internal areas with an explosion hazard.
Periodically check that the pump is working smoothly, paying special attention to the presence of air in the pumped fluid, which may be caused by damaged packings.
→ Avoid operating the pump with damaged packings.
→ Ensure that the separating agent tank is filled with sufficient separating agent.

5 DESCRIPTION

5.1 SCOPE OF DELIVERY

Order No.	Stk	Designation
2301858	1	Frame-mounted diaphragm pump Cobra 40-10 consisting of: Fluid section, air motor, connection elements
The standard equipment includes:		
322981	1	Sign
236219	1	Grounding cable, complete
341434	1	Double open-end wrench
See Chapter 12.3	1	Conformity certificate GM2000W
2303152	1	Operating manual, German
see Chapter 1	1	Operating manual in the local language

The delivery note shows the exact scope of delivery.
Accessories: see Chapter 10.

5.2 DATA

5.2.1 MATERIALS OF PAINT-WETTED PARTS

Inlet housing	Consital® (aluminum alloy)
Fluid section	Consital® (aluminum alloy)
Valve balls	Stainless steel
Valve seats/valve cone	Carbide
Diaphragms	Resistant PA
Valve fitting	1.4104

5.2.2 TECHNICAL DATA

Description	Devices	Cobra 40-10
Pump ratio		40:1
Volume flow per double stroke (DH)	cm^3 cu inch	10 0.6
Maximum operating overpressure	MPa bar psi	25 250 3626
Maximum possible strokes in operation	DH/min	200
Minimum/maximum air inlet pressure	MPa bar psi	0.25-0.6 2.5-6 36.3-87

Description	Devices	Cobra 40-10
Ø Air inlet (inside thread)	inch	G 1/2
Minimum Ø of the compressed air supply line	mm inch	13 0.51
Air consumption at 0.6 MPa; 6 bar; 87 psi per double stroke	NL	3.5
Sound pressure level at maximum permissible air pressure*	dB(A)	74
Sound pressure level at 0.45 MPa; 4.5 bar; 65.27 psi air pressure*	dB(A)	72
Sound pressure level at 0.3 MPa; 3 bar; 43.5 psi air pressure*	dB(A)	69
Air motor piston diameter	mm inch	80 3.15
Product inlet (outside thread)	mm	M36x2
Product outlet connection (inside thread)	inch	G 3/8"
Product outlet (outside thread)	inch	G 1/4"
Weight	kg; lb	19; 41.9
Product pH value	pH	3.5-9
Maximum product pressure at pump inlet	MPa bar psi	2 20 290
Product temperature	°C °F	+10 ÷ +80 +50 ÷ +176
Ambient temperature	°C °F	+10 ÷ +60 +50 ÷ +140
Allowable inclination for operation	∠°	±10
Hydraulic oil filling amount (approximate)	L cu inch	0.110 6.71

* A-rated sound pressure level measured at 1 m distance, LpA1m, in accordance with DIN EN 14462: 2005.

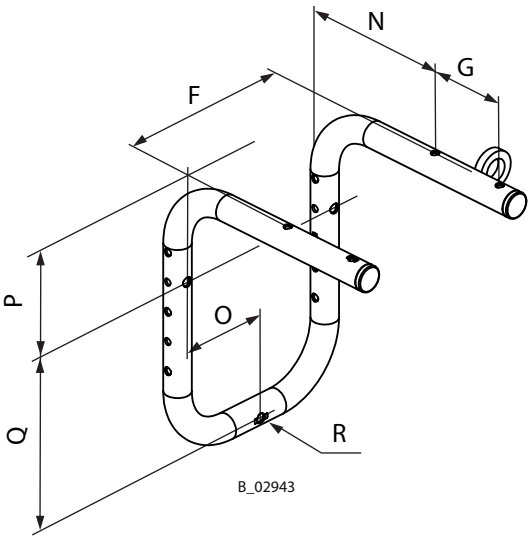
Reference measurements have been made by SUVA (Swiss Accident Insurance Institute).

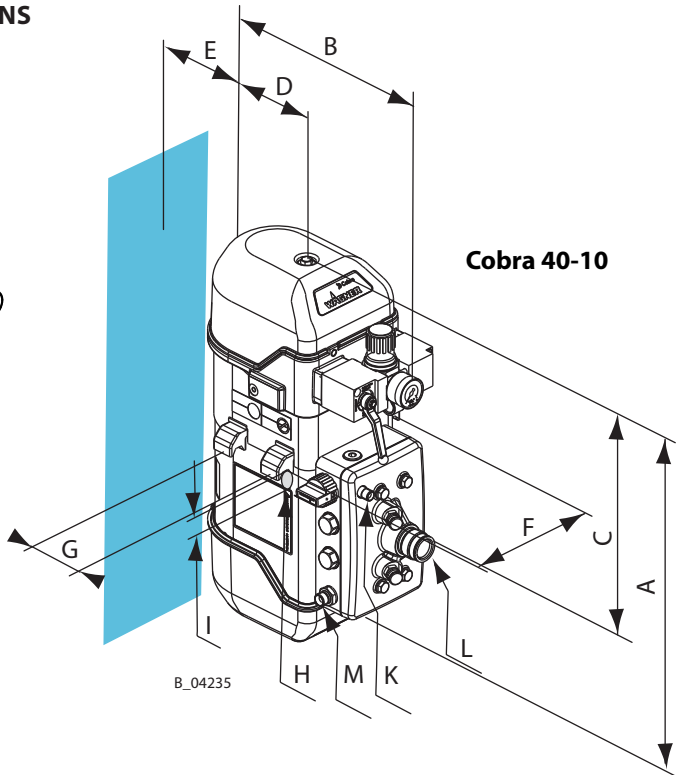
⚠ WARNING

Outgoing air containing oil!
Risk of poisoning if inhaled.

→ Provide compressed air free from oil and water (quality standard 5.5.4 according to ISO 8573.1) 5.5.4 = 40 µm / +7 / 5 mg/m³.

5.2.3 MEASUREMENTS AND CONNECTIONS





Measurement	Cobra 40-10 mm; inch
A	505; 19.88
B	313; 12.32
C	322; 12.68
D	134; 5.28
E	55; 2.16
F	182; 7.16
G	80; 3.15
H	M6
I	ø25; ø0.98
K	G1/4"
L	M36x2
M	NPSM1/4-18
N	149; 5.87
O	91; 3.58
P	107; 4.21
Q	175; 6.89
R	ø7; ø0.28

5.2.4 VOLUME FLOW

Wagner AL nozzles			Volume flow in l/min.*			
ø inch	ø mm	Spray angle	at 7 MPa 70 bar 1015 psi	at 10 MPa 100 bar 1450 psi	at 15 MPa 150 bar 2175 psi	
0.007	0.18	40°	0.1650	0.2000	0.2400	
0.009	0.23	20-30-40-50-60°	0.2060	0.2500	0.3090	
0.011	0.28	10-20-30-40-50-60°	0.2950	0.3450	0.4260	
0.013	0.33	10-20-30-40-50-60-80°	0.4530	0.5280	0.6600	
0.015	0.38	10-20-30-40-50-60-80°	0.5770	0.6720	0.8130	
0.017	0.43	20-30-40-50-60-70°	0.7310	0.7860	1.0640	
0.019	0.48	20-30-40-50-60-70-80°	0.9260	1.0920	1.3700	
0.021	0.53	20-40-50-60-80°	1.1430	1.3600	1.6900	
0.023	0.58	20-40-50-60-70-80°	1.3700	1.5900	2.0100	Cobra 40-10
0.025	0.64	20-40-50-60-80°	1.6200	1.9100	2.4000	
0.027	0.69	20-40-50-60-80°	1.8300	2.1300	2.6800	
0.029	0.75	60°	2.1900	2.5100	3.1700	
0.031	0.79	20-40-50-60°	2.4000	2.7700	3.4900	
0.035	0.90	20-40-50-60°	3.2200	3.7400	4.6900	
0.043	1.10	20-50°	5.0700	6.0400	7.4600	
0.052	1.30	50°	5.1200	6.5000	7.5200	

* Volume flow refers to water.

Maximum ranges for continuous operation at 200 DH/min.

5.2.5 PERFORMANCE DIAGRAMS

Example

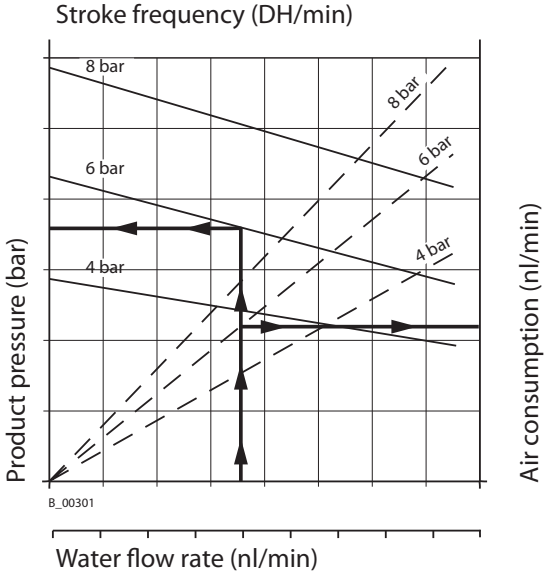
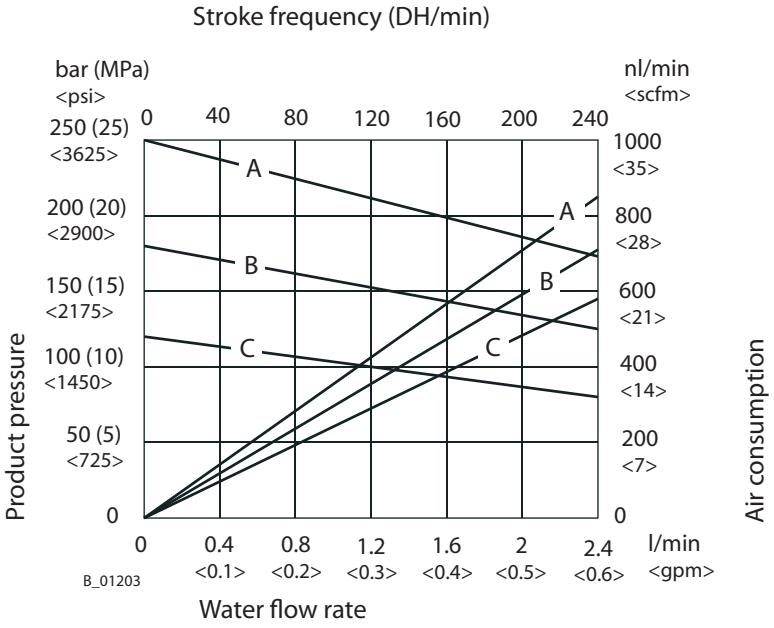


Diagram for Cobra 40-10

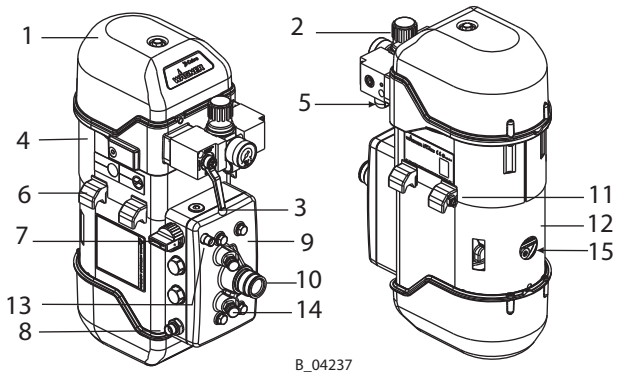


A = 6 bar (0.6 MPa; 87 psi) air pressure
B = 4.5 bar (0.45 MPa; 65 psi) air pressure
C = 3 bar (0.3 MPa; 44 psi) air pressure

5.3 FUNCTION

5.3.1 PUMP

Cobra 40-10



1 Control housing with integrated silencer
2 Air pressure regulator
3 Ball valve
4 Air motor
5 Compressed air inlet
6 Mounting flange
7 Relief valve
8 Product outlet
9 Fluid section
10 Product inlet
11 Grounding connection
12 Pressure stage casing
13 Return socket
14 Valve depressor
15 Exhaust air cap

General information
The double diaphragm pump is driven with compressed air. This compressed air moves the air piston in the air motor (4), and consequently the piston rod in the pressure stage (9), up and down. At the end of each stroke the compressed air is redirected by a reversing valve and the control piston. The up-and-down movement of the 2 diaphragms within the fluid section is produced by hydraulic oil, which is moved by the piston in the pressure stage. With every stroke of the piston rod, working material is sucked in and delivered to the spray gun at the same time.

Air motor (4)
The air motor with its pneumatic reverse (1) does not require pneumatic oil.
The compressed air is fed to the motor via the air pressure regulator (2) and the ball valve (3).

The air motor is fitted with a safety valve. The safety valve has been set and sealed at the factory. In case of pressures over and above the permissible operating pressure, the valve, which is held with a spring, automatically opens and releases the excess pressure.

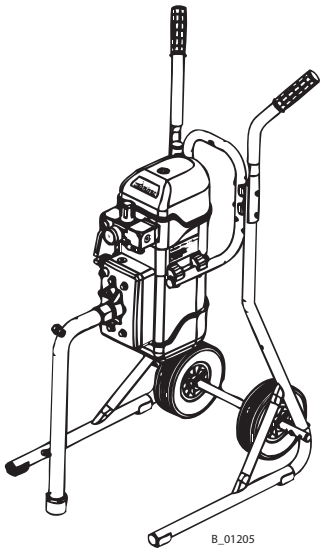
⚠ WARNING

Overpressure!
Risk of injury from bursting components.

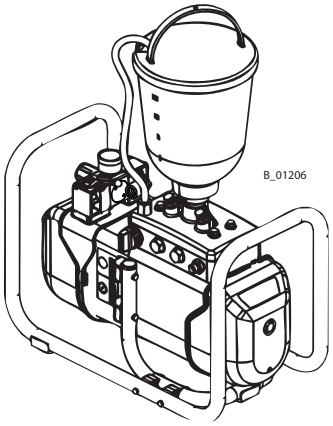
→ Never change the safety valve setting.

Fluid section (9)
The fluid section has been designed as a double diaphragm pump with exchangeable inlet and outlet valves. Change between "spraying mode" and "circulation mode" using the relief valve (7).

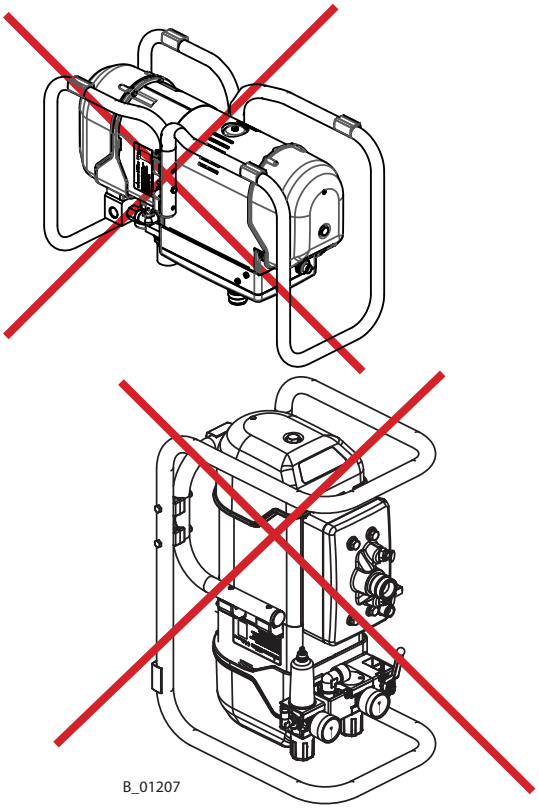
Positioning
The Cobra pump may only be operated in a horizontal or vertical position as shown in the diagrams. Overhead operation is not permitted.



Vertical positioning



Horizontal positioning



Overhead positioning

NOTICE

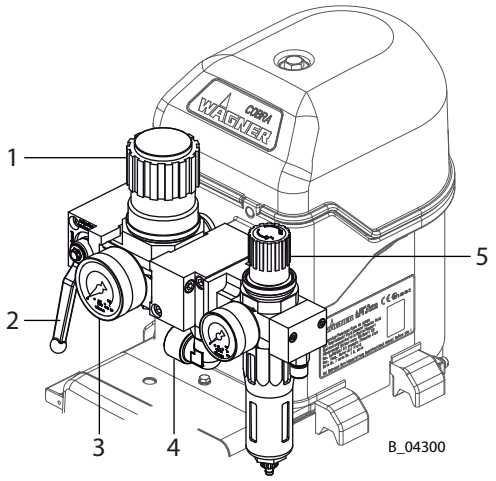
Overhead operation or storage (air motor with pressure regulator below)
Air could get into the hydraulic circuit, causing a malfunction.

→ Avoid overhead operation or storage at all costs.
→ Vent, see service manual.

5.3.2 PRESSURE REGULATOR UNIT FOR COBRA

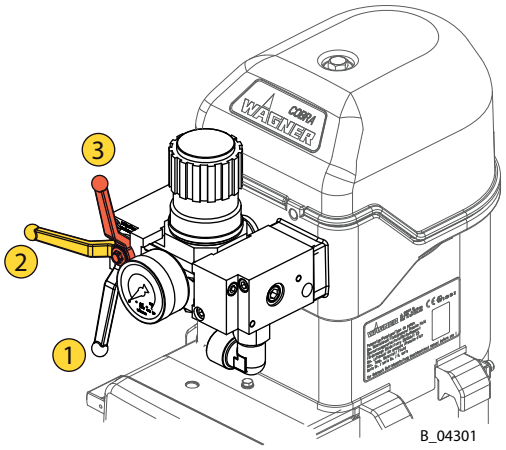
1 Pressure regulator
2 Ball valve
3 Pressure gauge
4 Compressed air inlet
5 AirCoat filter regulator Cobra (accessories)

The AirCoat filter regulator must be mounted vertically in all installation positions for the diaphragm pump (see assembly manual for Filter Regulator, order number 2328614).



Positions of the ball valve

1 **Open**: working position
2 **Closed:** The air motor can still be under pressure.
3 **Vent:** Operating pressure in the air motor is vented (control pressure is still present).



6 ASSEMBLY AND COMMISSIONING

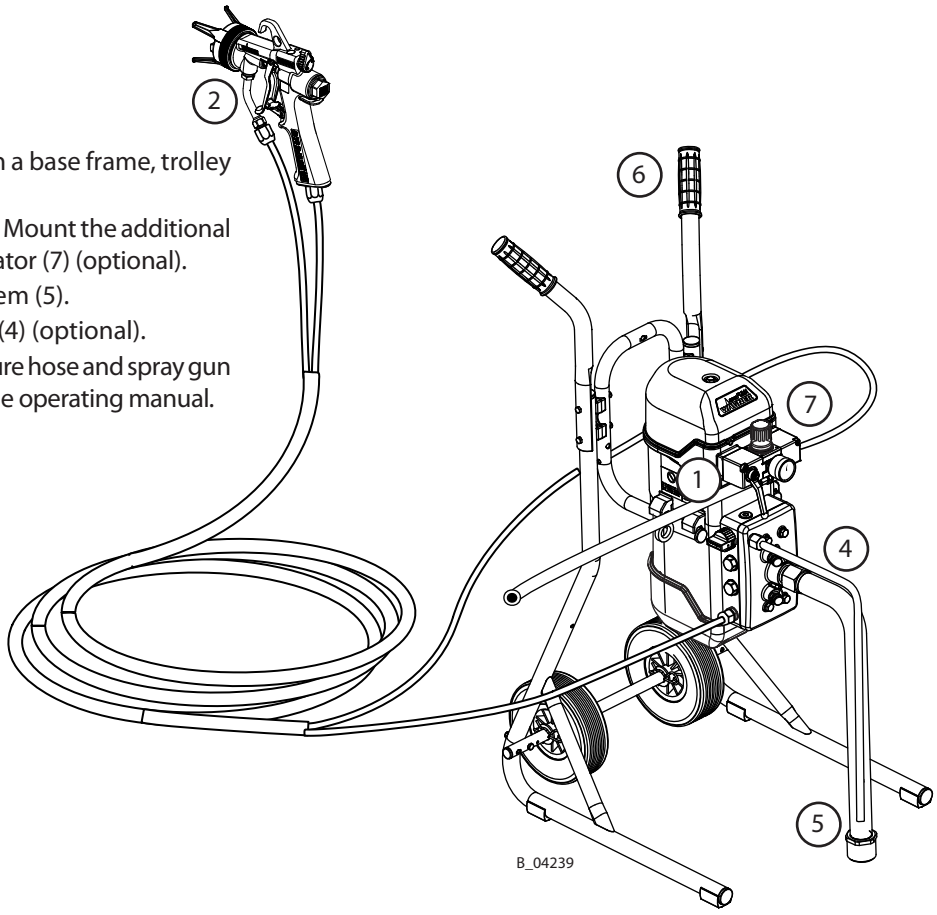
6.1 INSTALLATION AND CONNECTION

6.1.1 INSTALLING THE PUMP

Note:
This pump can be used as part of a spraying system for Airless or AirCoat applications. The components can be found in the accessories list, provided that the system was not obtained as a spray pack.
The nozzles must be selected according to the gun instructions.

Procedure:

1 Mount the pump on a base frame, trolley (6), or wall mount.
2 For AirCoat systems: Mount the additional filter pressure regulator (7) (optional).
3 Mount suction system (5).
4 Mount return hose (4) (optional).
5 Connect high-pressure hose and spray gun (2) as described in the operating manual.



	⚠ WARNING
	Inclined ground! Risk of accidents if the device rolls away/falls. → Position the trolley with the piston pump horizontally. → If the surface is inclined, position the feet of the trolley towards the gradient. → Secure the trolley.

6.1.2 GROUNDING

⚠ WARNING

Discharge of electrostatically charged components in atmospheres containing solvents!
Explosion hazard from electrostatic sparks.

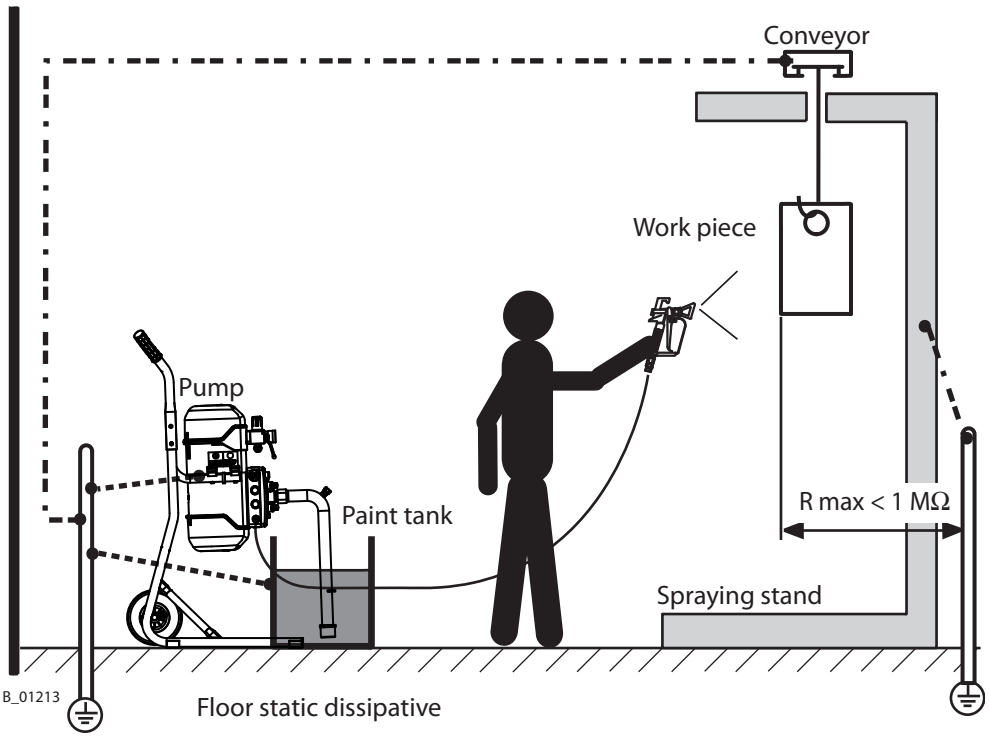
→ Only use a damp cloth to clean the piston pump.

⚠ WARNING

Heavy paint mist if grounding is insufficient!
Danger of poisoning.
Insufficient paint application quality.

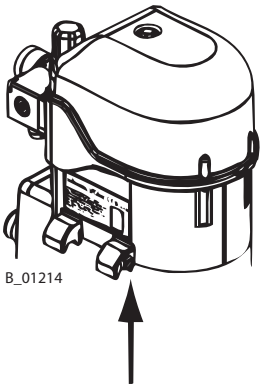
→ Ground all device components.
→ Ground the work pieces to be coated.

Grounding scheme (example)



Cable cross sections

Pump	4 mm^2; AWG11
Paint tank	6 mm^2; AWG10
Conveyor	16 mm^2; AWG5
Booth	16 mm^2; AWG5
Spraying stand	16 mm^2; AWG5



Procedure:

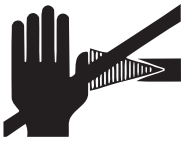
1 Screw on grounding cable with eye.
2 Clamp the grounding cable clip to a grounding connection on site.
3 Ground the product (paint) tank to an on-site grounding connection.
4 Ground the other parts of the system to an on-site grounding connection.

6.2 COMMISSIONING

6.2.1 SAFETY INSTRUCTIONS

Every time before starting up, the following points should be observed as laid down in the operating manual:

- Observe all safety regulations in accordance with Chapter 4.
- Carry out commissioning properly.



⚠ WARNING

High-pressure spray jet!
Danger to life from injecting paint or solvent.

→ Never reach into the spray jet.
→ Never point the spray gun at people.
→ Consult a doctor immediately in the event of skin injuries caused by paint or solvent. Inform the doctor about the paint or solvent used.
→ Never seal defective high-pressure parts; instead relieve the pressure from them and replace them.

⚠ WARNING

Toxic and/or flammable vapor mixtures!
Risk of poisoning and burns.

→ Operate the device in a spray booth approved for the working materials.
-or-
→ Operate the device on an appropriate spraying wall with the ventilation (extraction) switched on.
→ Observe national and local regulations for the outgoing air speed.

⚠ WARNING

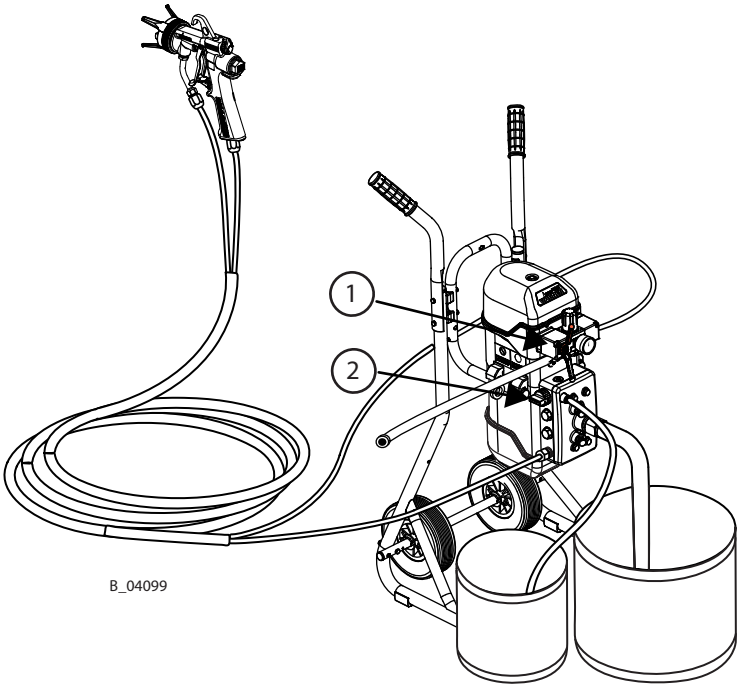
Gas mixtures can explode if there is an incompletely filled pump!
Danger to life from flying parts.

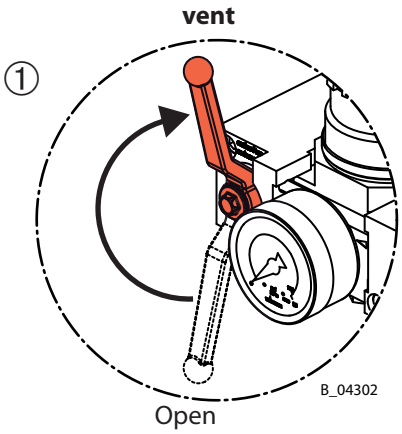
→ Ensure that the pump and suction system are always completely filled with cleaning agent or working medium.
→ Do not spray the device empty after cleaning.

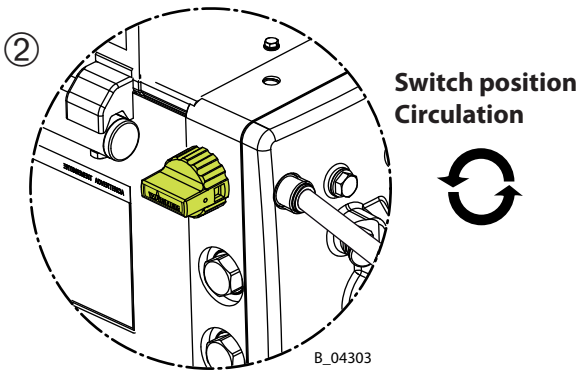
Before every start-up, the following points should be observed:
- Secure gun with safety clip.
- Check the permissible pressures.
- Check all connecting parts for leaks.
- Check hoses for damage.

It should be ensured that the device is in the following state before carrying out any work on it:
- The pressure should be released from the pump and high-pressure hose with gun.
- The gun should be secured with the safety clip.
- The air supply should be interrupted.

Cobra EMERGENCY STOP
In the event of unforeseen occurrences, the ball valve (1) should be **vented** immediately and the relief valve (2) opened.

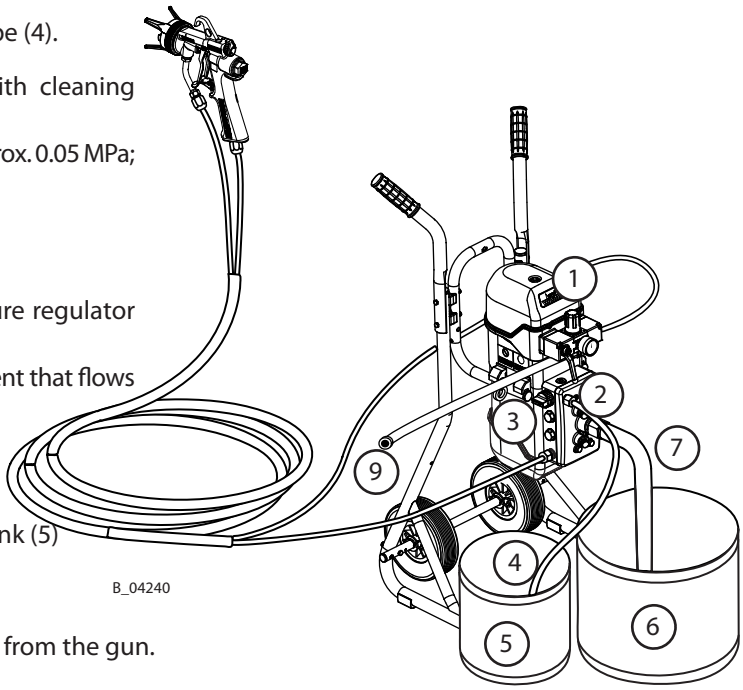






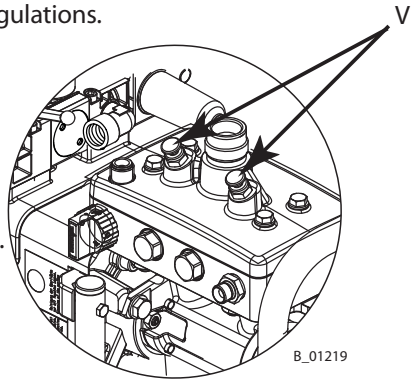
6.2.2 BASIC FLUSHING

1 Place empty tank (5) under return tube (4).
2 Place suction hose (7) in a tank with cleaning agent (6).
3 Adjust the pressure regulator (1) to approx. 0.05 MPa; 0.5 bar; 7.25 psi.
4 Open relief valve (3).
5 Slowly open the ball valve (2).
6 Adjust the air pressure on the pressure regulator (1) so that the pump runs smoothly.
7 Rinse the system until the cleaning agent that flows into the tank (5) is clean.
8 Close ball valve (2).
9 Reverse the relief valve (3).
10 Point the gun, without nozzle, into tank (5) and open it.
11 Slowly open the ball valve (2).
12 Flush until clean flushing agent flows from the gun.
13 Close ball valve (2).
14 When there is no pressure remaining in the system, close the gun.
15 Secure the gun.
16 Dispose of the contents of the tank (5) according to the local regulations.



B_04240

Note:
During the flushing procedure, briefly press both valve depressors (V).

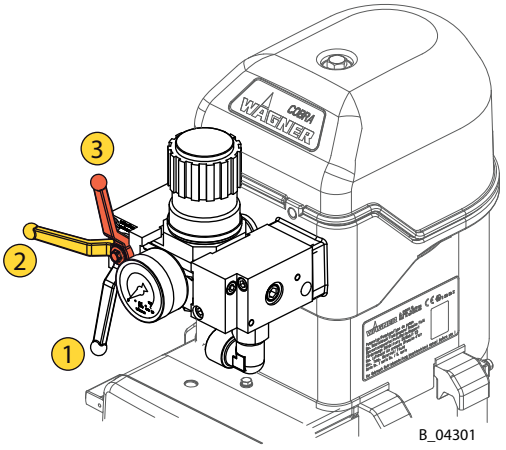


B_01219

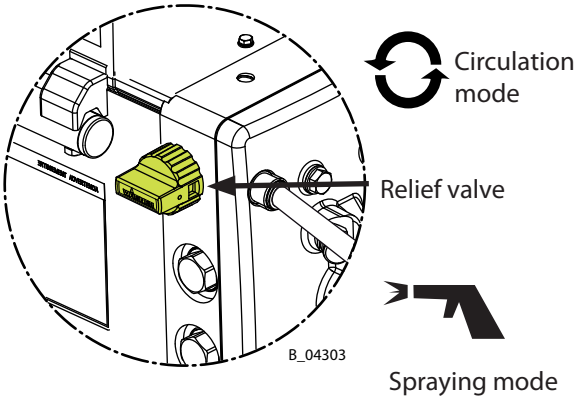
6.2.3 FILLING WITH WORKING MATERIAL

Positions of the ball valve

1 **Open**: working position
2 **Closed:** The air motor can still be under pressure.
3 **Vent:** Operating pressure in the air motor is vented (control pressure is still present).



1 Place suction hose (7) and return tube (4) into the tank with the working material (6).
2 Adjust the pressure regulator (1) to approx. 0.05 MPa; 0.5 bar; 7.25 psi.
3 Open relief valve (3).
4 Slowly open the ball valve (2).
5 Adjust the air pressure on the pressure regulator (1) so that the pump runs smoothly.
6 Close ball valve (2) as soon as pure working material starts coming from the return tube (4).
7 Set relief valve (3) to "spray".
8 Point the gun, without nozzle, into tank (5) and open it.
9 Slowly open the ball valve (2).
10 Close ball valve (2) as soon as pure working material starts coming from the gun.
11 When there is no pressure remaining in the system, close the gun.
12 Secure the gun.

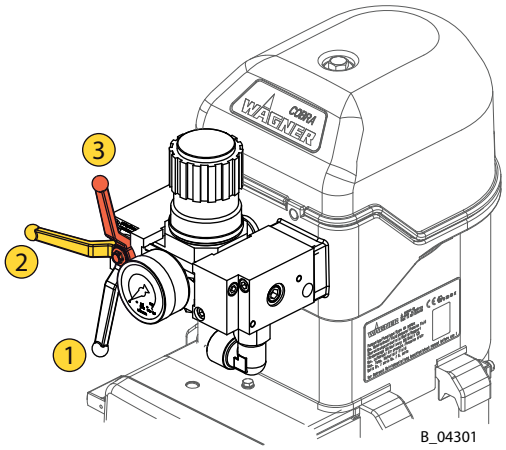


7 OPERATION

7.1 SPRAYING

Positions of the ball valve

1 **Open**: working position
2 **Closed:** The air motor can still be under pressure.
3 **Vent:** Operating pressure in the air motor is vented (control pressure is still present).



1 Secure gun and place nozzle in the gun.
2 Slowly open the ball valve.
3 Set the required working pressure on the pressure regulator.
4 Optimize the spraying results as laid down in the gun instructions.
5 Start work process.

Note: Depending on the function, the pump may continue running for 1 - 6 DH/min. after the spray gun is closed.

7.2 WORK INTERRUPTION

1 Close gun.
2 Close ball valve.
3 Release the system by opening the gun.
4 Close and secure gun.

If the system has been used with 2K products:

NOTICE

Hardened working material in the spraying system when 2K product is processed!
Destruction of pump and injection system.

→ Follow the manufacturer's processing rules, particularly regarding the pot life.
→ Flush thoroughly before the end of the pot life.

7.3 DECOMMISSIONING AND CLEANING

Note:
The device should be cleaned for maintenance purposes, etc. Ensure that no remaining product dries on and sticks to the device.

Procedure:
1 Carry out work interruption -> refer to Chapter 7.2.
2 Carry out basic flushing -> refer to Chapter 6.2.2.
3 Maintain the gun according to the operating manual.
4 Clean and check the suction system and the suction filter.
6 Clean the outside of the system.
7 Put the whole system back together.
8 Fill the system with cleaning agent as described in Chapter 6.2.3 "Filling with working material".

⚠ WARNING

Brittle filter pressure regulator!
The tank on the filter pressure regulator becomes brittle through contact with solvents and can burst.
Flying parts can cause injury.

→ Do not clean the tank on the filter pressure regulator with solvent.

⚠ WARNING

Gas mixtures can explode if there is an incompletely filled pump!
Danger to life from flying parts.

→ Ensure that the pump and suction system are always completely filled with cleaning agent or working medium.
→ Do not spray the device empty after cleaning.

7.4 LONG-TERM STORAGE

If storing the system for a prolonged period of time, thorough cleaning and corrosion protection are necessary. Replace the water or solvent in the material pump with a suitable preserving oil and fill the separating agent cup with separating agent.

Procedure:
1 Carry out points 1 through 7 in Chapter 7.3 "Decommissioning and Cleaning".
2 Flush with preservative according Chapter 6.2.2.

8 TROUBLESHOOTING, MAINTENANCE, AND REPAIR

8.1 TROUBLESHOOTING AND RECTIFICATION

Problem	Cause	Remedy
Pump does not work.	Air motor does not work or stops.	Open and close ball valve on the pressure regulator unit or briefly disconnect compressed air supply.
	No pressure indication on the pressure gage (air pressure regulator defective).	Disconnect compressed air supply briefly or repair or change pressure regulator.
	Spray nozzle is clogged.	Clean the nozzle according to the instructions.
	Insufficient compressed air supply.	Check compressed air supply.
	Filter insert in spray gun or high-pressure filter is clogged.	Clean the parts and use a suitable working material.
	Fluid section or high-pressure hose is blocked (e.g. 2K product hardened).	Dismount and clean fluid section, replace high-pressure hose.
	Grease in spool and sleeve assembly. Pump stops at the stroke end occasionally.	Degrease spool and sleeve assembly. Check detent body.
Poor spray pattern.	See gun instructions.	
Irregular operation of product pump: spray jet collapses (pulsation)	Viscosity is too high.	Thin spraying product.
	Spraying pressure is too low.	Increase air inlet pressure. Use a smaller nozzle.
	Valves are clogged.	Press valve depressor. Clean product pump and leave to soak in cleaning agent if necessary.
	Foreign body in suction valve.	Dismount suction valve housing, clean, and check valve seat.
	Diameter of compressed air line too small.	Assemble a larger supply line -> Technical data, see Chapter 5.2.2.
	Valves, packings, or pistons are worn out.	Replace the parts.
	Control air filter or work air filter is clogged.	Check filter and clean it if necessary.
Strongly irregular operation of material pump.	Diaphragms "blocked" because suction is too fast.	Operate pump with ball valve opened a minimal amount for a while.
The pump runs evenly, does not however, suck up product.	The suction system's union nut is loose; the pump is taking in air.	Tighten.
	Suction filter is clogged.	Clean filter.
	Valves are clogged.	Press valve depressor. Clean product pump and leave to soak in cleaning agent if necessary.

Problem	Cause	Remedy
Pump runs fast when the spray gun is closed.	Valves worn.	Replace the parts.
Loss of power due to severe icing.	There is a lot of condensation water in the air supply.	Install a water separator.

If none of the causes of malfunction mentioned are present, the defect can be remedied by a WAGNER Service Center.

9 MAINTENANCE

⚠ WARNING

Incorrect maintenance/repair!
Danger to life and damage to the device.

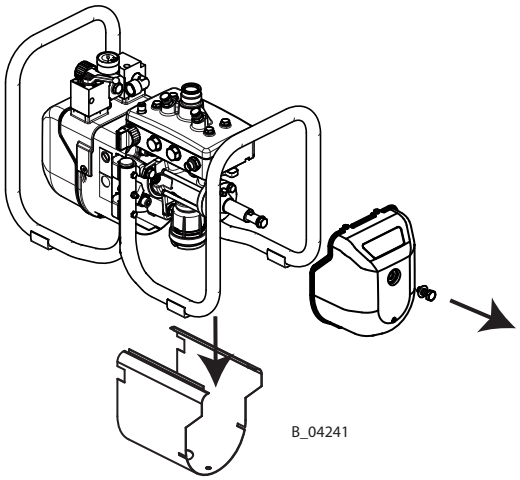
- → Only a WAGNER service center or a suitably trained person may carry out repairs and replace parts.
- → Only repair and replace parts that are listed in the "Spare Parts Catalogue" chapter and that are assigned to the device.
- → Before all work on the device and in the event of work interruptions:
  - Disconnect the control unit from the mains.
  - Relieve the pressure from the spray gun and device.
  - Secure the spray gun against actuation.
- → Observe the operating manual and service instructions at all times when carrying out work.

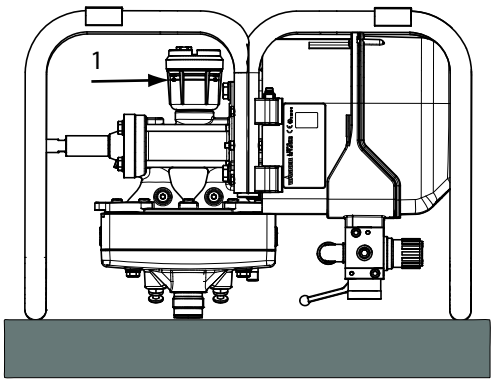
1 Check and clean the high-pressure filter every day or as required.
2 Each decommissioning procedure should be carried out as described in Chapter 7.3.
3 Check hoses, pipes, and couplings every day and replace if necessary.

WAGNER recommends having all spraying devices checked annually by a technical expert (e.g. WAGNER service technician) for safety reasons.

9.3 HYDRAULIC STAGE MAINTENANCE

Dismount the device onto a stand as shown in the picture and turn it upside down.
Observe the fill level marking (X) on the oil tank.


B_04241



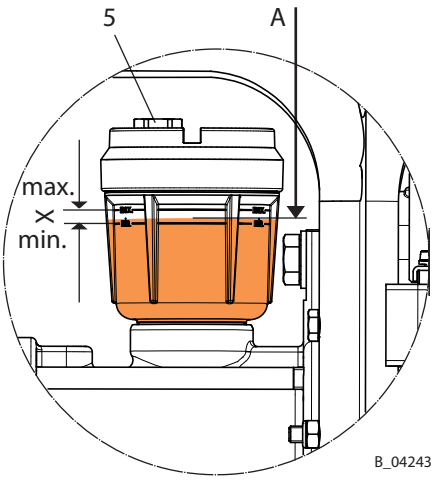
B_04242

9.3.1 CHECKING THE OIL LEVEL

1 Start up the pump for a short time without any product.
2 Then read oil level A.

Dismount the device onto a stand as shown in the picture and turn it upside down.
Observe the fill level marking (X) on the oil tank.

Oil level A in the oil tank (1) has to be within the specified markings (X).
If the level deviates from these markings, the hydraulic oil must be topped up.



B_04243

Procedure:

1 Unscrew and remove threaded plug (5).
2 Top up oil to level A = middle of marking X.
3 Start up the pump for a short time without any product and check for air bubbles.
4 Screw in threaded plug (5) and tighten with 2 Nm; 1.5 lbft.

NOTICE

Using hydraulic oil
Using the wrong hydraulic oil can cause a malfunction.

→ Use only original hydraulic oil - Wagner Order No. 322912 (250 ml or 15 cu inch).

9.3.2 CHANGING THE OIL

The oil should be changed after 500 service hours or once a year.

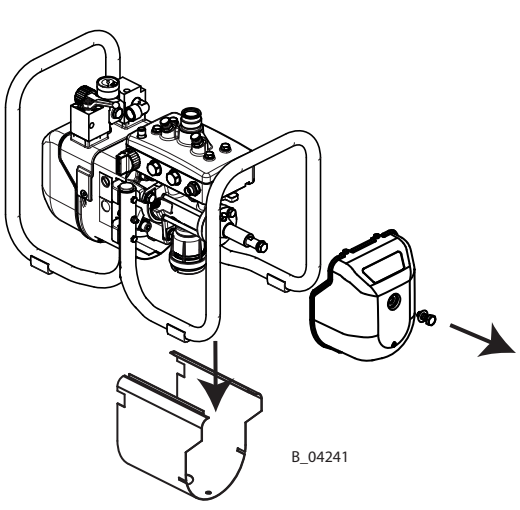
Necessary accessories:
Order No. 322911 Oil filling set

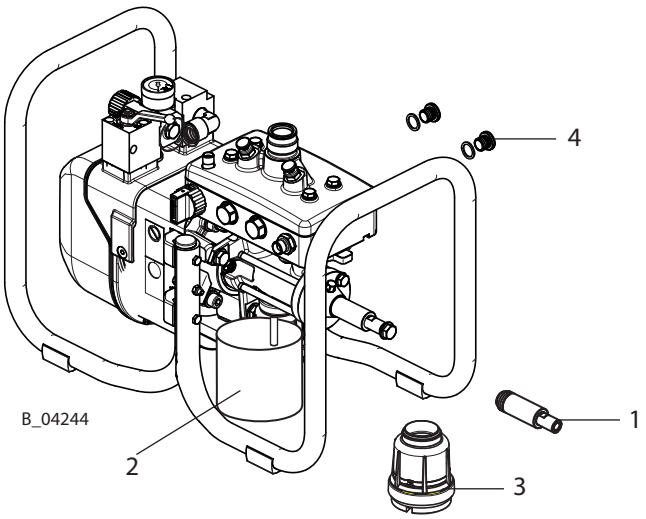
NOTICE
Using hydraulic oil Using the wrong hydraulic oil can cause a malfunction. → Use only original hydraulic oil - Wagner Order No. 322912 (250 ml or 15 cu inch).

Discharging oil

Procedure:

1 Decommission and clean the device -> follow Chapter 7.3 up to and including point 6.
2 Position device as shown in the picture and dismount the hood and casing.
3 Unscrew piston cover (1).
4 Place empty oil collector (2) under the oil tank.
5 Unscrew oil tank (3) and drain contents.
6 Unscrew and remove locking screws (4) and seals.
7 Slowly start up the pump until no oil flows out of the oil suction fitting.
8 Screw in clean oil tank (3) and seal.





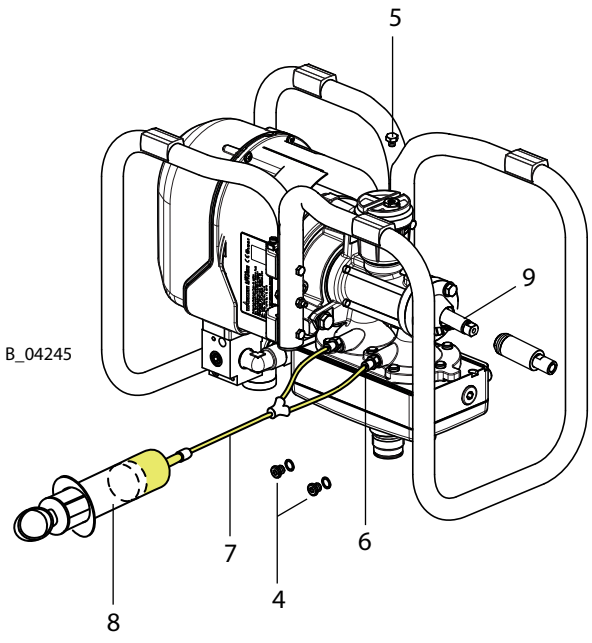
⚠ CAUTION

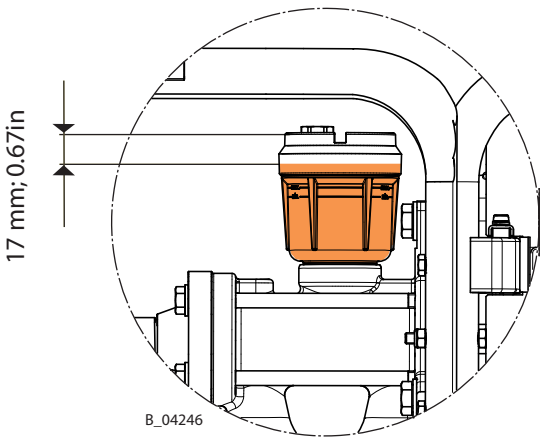
Environmental pollution caused by waste oil!
Waste oil in the sewage network or spilled on the ground causes severe environmental damage.
Groundwater pollution is liable to prosecution.
→ Collect waste oil and bring it to a collection point.
→ Waste oil is taken back by the seller when purchasing hydraulic oil.

Filling hydraulic stage with oil

Procedure:

1 Turn pump (mounted on the base frame) upside down.
2 Unscrew and remove threaded plug (5).
3 Unscrew 2 locking screws (4) and replace with 2 screw fittings (6) from the oil filling set.
4 Connect hoses with Y-pieces (7).
5 Fill syringe (8) with hydraulic oil and insert into hose.
6 Move piston (9) into front end position. Use the syringe to fill the hydraulic stage until the oil flows out of the suction fitting into the oil tank (3) with no air bubbles.
7 Move piston (9) into rear end position. Use the syringe to fill the hydraulic stage until the oil flows out of the suction fitting into the oil tank (3) with no air bubbles.
8 Continue to top up the oil until the level before venting is approx. 17 mm; 0.67 inches below the upper edge of the oil tank.
9 Screw in threaded plug (5) and tighten gently. Put pump on its side and dismount oil filling set. Seal the filler openings tightly with 2 locking screws (4).

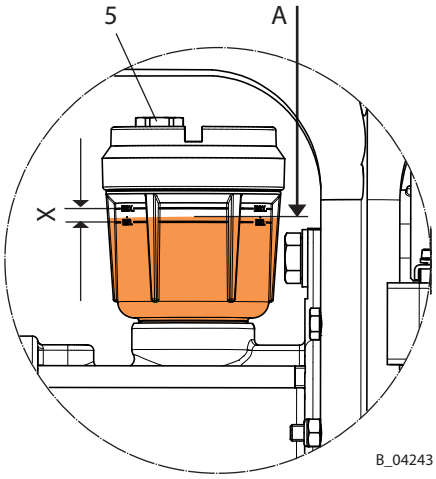


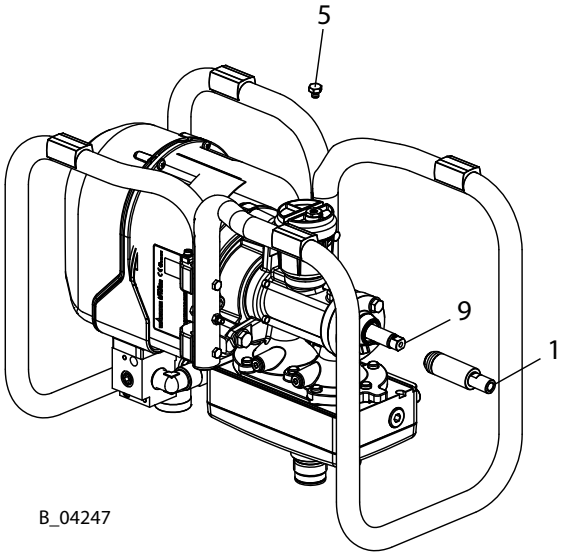


Vent

Procedure:

1 Turn the pump upside down. Remove the threaded plug (5).
2 Slowly start up (vent) the pump until no air bubbles appear from the oil suction fitting.
3 Oil level A in the oil tank has to be within the specified markings (X).
4 Screw in threaded plug (5) and tighten with 2 Nm; 1.5 lbft.
5 Mount piston cover (1) and hood with casing.
6 The device is ready for operation again.





10 ACCESSORIES

10.1 COBRA 40-10 ACCESSORIES

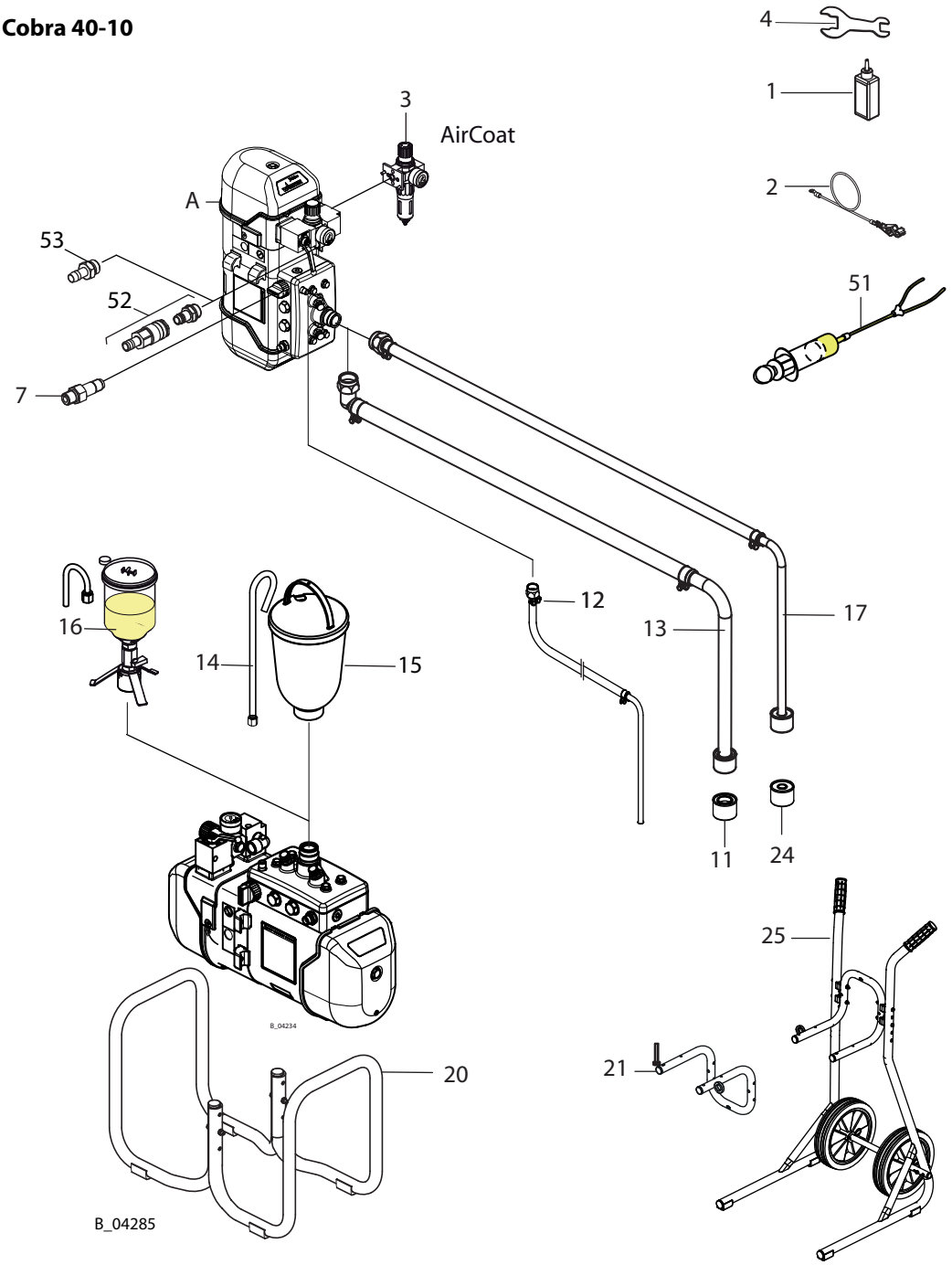
Accessories list for Cobra 40-10

Pos	K	Order No.	Designation
A		2301858	Diaphragm pump Cobra 40-10
1	◆	322912	Hydraulic oil (for pressure stage) 250 ml; 250 cc
2	◆	236219	Grounding cable 3 m; 9.8 ft
3		2333479	AirCoat filter pressure regulator
4		341434	Double open-end wrench
7		2325343	Fitting DF-MM-R1/4"-M12-PN270-SSt
11		2323325	Air suction filter DN25
12		2329046	Return hose DN6-PN310-G1/4"-PA
13		2324116	Suction hose DN25
14		2333163	Return tube for item 15
15		2344505	Hopper set 5L Cobra
16		2321424	Small quantity cup
17		2324110	Suction hose DN16
20		322052	Frame, complete
21		2332143	Wall mount 4", complete
24		2323396	Air suction filter DN16
25		2325901	Trolley 4", complete
51	◆	322911	Oil filling set with 100 ml; 100 cc syringe
52	◆	322916	Air coupling set DN 10 mm; 0.39 inch
53	◆	9985619	Hose connector with sealing ring

◆ = Wearing parts

Regarding position 7:
Fitting (7) can be screwed in instead of the relief valve. In this case, the required ball valve must be provided by the customer. The return hose can no longer be connected to the "return socket" output.

Cobra 40-10


4
1
3
AirCoat
2
A
53
52
51
7
16
14
15
12
13
17
11
24
25
21
20
B_04234
B_04285

11 SPARE PARTS

11.1 HOW CAN SPARE PARTS BE ORDERED?

Always supply the following information to ensure delivery of the right spare part:

Order number, designation, and quantity
The quantity need not be the same as the number given in the "**Stk**" column in the lists. This number merely indicates how many of the respective parts are used in each component.

The following information is also required to ensure smooth processing of your order:
- Billing address
- Delivery address
- Name of the person to be contacted in the event of any queries
- Type of delivery (normal mail, express delivery, air freight, courier, etc.)

Identification in spare parts lists

Explanation of column "**K**" (labeling) in the following spare parts lists:

◆ Wearing parts
Note: No liability is assumed for wearing parts.

● Not part of the standard equipment but available as a special accessory.

⚠ WARNING

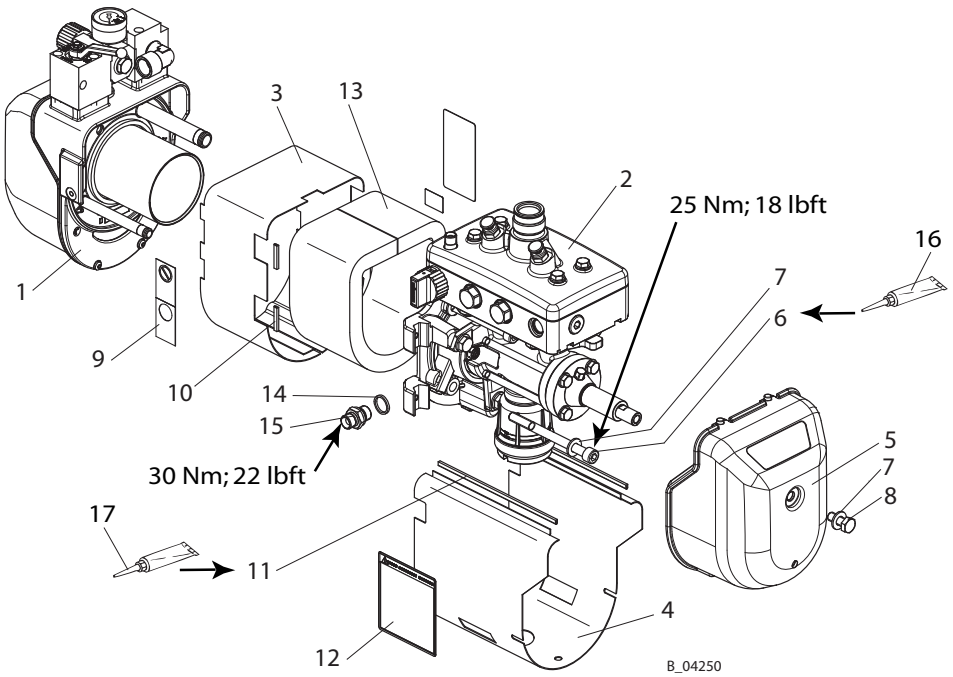
Incorrect maintenance/repair!
Risk of injury and damage to the device.

→ Have repairs and part replacements carried out only by specially trained staff or a WAGNER service center.
→ Before all work on the device and in the event of work interruptions:
- Switch off the energy/compressed air supply.
- Relieve the pressure from the spray gun and device.
- Secure the spray gun against actuation.
→ Observe the operating manual and service instructions at all times when carrying out work.

11.2 OVERVIEW OF THE COBRA 40-10 COMPONENTS

Pos	K	Stk	Order No.	Designation
1		1	-	Air motor 3/53
2		1	-	Preassembled Cobra 40-10 fluid section
3		1	322436	Air motor casing
4		1	322437	Pressure stage casing
5		1	322235	Hood 4 with air outlet
6		3	9907224	Hexagon socket head cap screw
7		4	9920106	Washer
8		1	9900107	Hexagon screw
9		1	2332077	Warning label
10		4	9999211	Edge protection profile 30 mm; 1.18 inch
11		2	9999211	Edge protection profile 164 mm; 6.46 inch
12		1	2332082	Fluid warning label
13		1	322438	Cylinder noise insulation
14	◆	1	9974112	Sealing ring
15		1	367913	Fitting-DF-MM-G3/8"-M16x1.5-PN530-SSt
16		1	9992616	Molykote DX grease
17		1	9992699	Loctite 406

◆ = Wearing parts



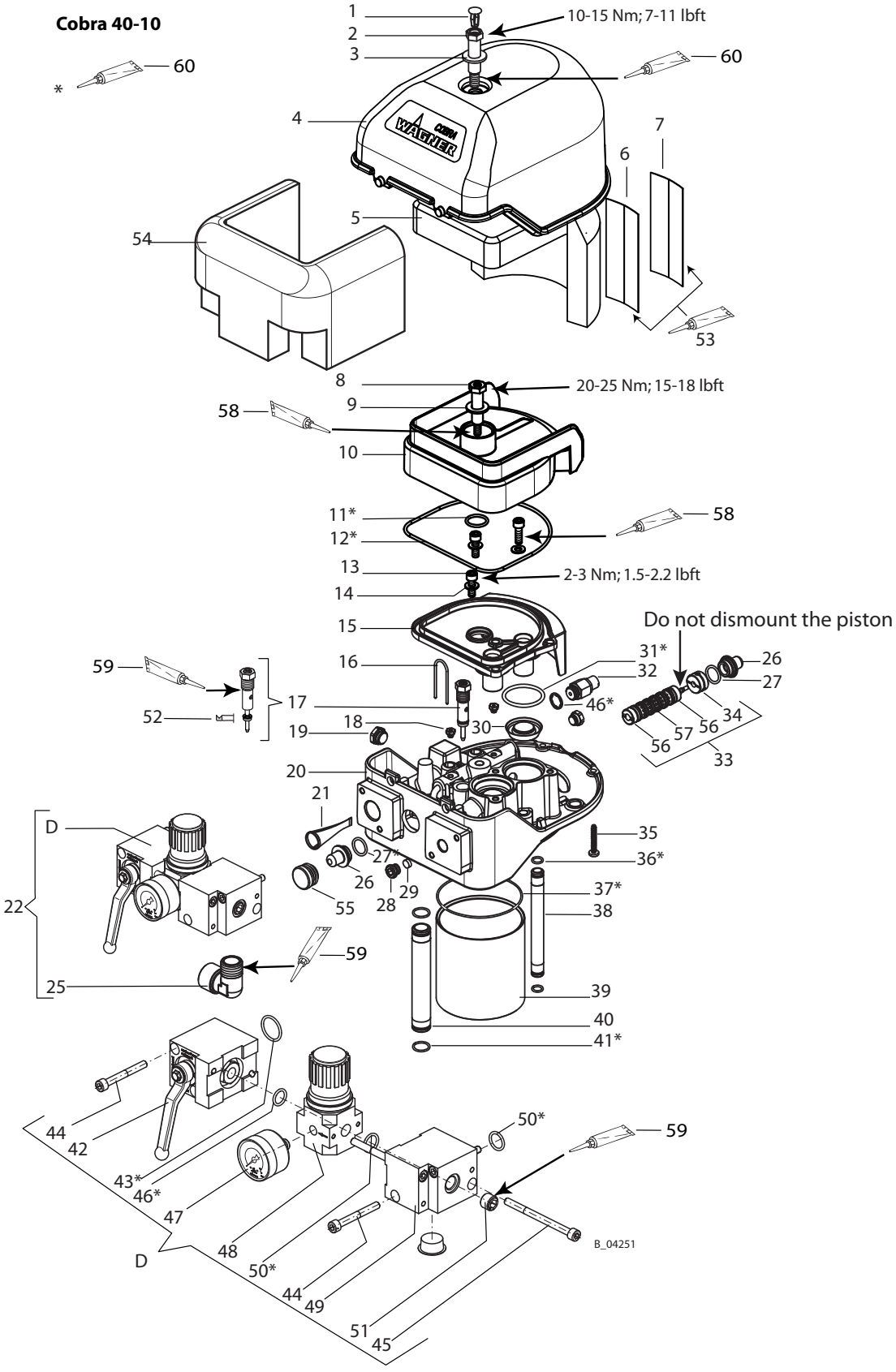
11.3 COBRA 40-10 AIR MOTOR

Pos	K	Stk	Order No.	Designation
1		1	9998718	Drive fastener
2		1	367318	Shoulder screw 4
3		1	9925033	Washer
4		1	367311	Hood 4
5	◆	1	367319	Sound absorbing mat 4
6		1	9999152	Velcro fastener coating part
7		1	9999151	Velcro fastener adhesive part
8		1	367318	Shoulder screw 4
9		1	9925033	Washer
10		1	367310	Silencer 4
11	◆ ★	1	9974098	O-ring
12	◆ ★	1	9974097	O-ring
13		3	9900325	Socket cap screw
14		3	9920103	Washer A6.4
15		1	367309	Connecting part 4
16		2	367320	Cotter pin
17	◆	1	369290	Pilot valve
18		2	9998674	Threaded plug
19		1	9998274	Threaded plug
20		1	367315	Control housing 4
21	◆ ★	1	367313	Compressed air filter 4/6
22		1	2328606	Pressure regulator unit 4
25		1	9999228	Threaded connector L
26		2	367307	Sealing plug 4/6
27	◆ ★	2	9974085	O-ring
28		1	367324	Filter holder
29	◆ ★	1	367314	Control air filter
30	◆ ★	1	322910	Cobra outlet seal set (consisting of 2 seals)
31	◆ ★	2	9974095	O-ring
32		1	368285	Safety valve 0.63 MPa; 6.3 bar; 91 psi
33	◆	1	9943080	Spool and sleeve assembly, complete
34	◆	1	368038	Detent body, complete, ISO 1/2
35		2	9907126	Screw SFS Plastite 45
36	◆ ★	2	9974089	O-ring
37	◆ ★	2	9974115	O-ring
38		1	322432	Control air pipe
39		1	322430	Cylinder pipe
40		1	322431	Compressed air pipe
41	◆ ★	2	9971448	O-ring
42	◆	1	2310635	Edge ball valve mini 4

◆ = Wearing parts

★ = Included in service set

●= Not part of the standard equipment but available as a special accessory.

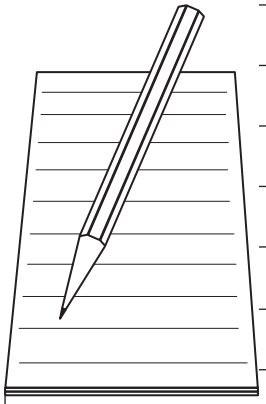

Cobra 40-10
1
2
3
4
5
6
7
8
9
10
11*
12*
13
14
15
16
17
18
19
20
21
22
25
26
27*
28
29
30
31*
32
33
34
35
36*
37*
38
39
40
41*
42
43*
44
45
46*
47
48
49
50*
51
52
53
54
55
56
57
58
59
60
10-15 Nm; 7-11 lbft
20-25 Nm; 15-18 lbft
2-3 Nm; 1.5-2.2 lbft
Do not dismount the piston
D
B_04251

Pos	K	Stk	Order No.	Designation
43	◆ ★	1	9971137	O-ring
44		4	9900316	Hexagon socket head cap screw M6x50
45		2	9907039	Hexagon socket head cap screw M6x80
46	◆ ★	1	9971313	O-ring
47	◆	1	2341175	Manometer with air regulator 0-10 bar, G1/8"
48	◆	1	2309972	Pressure regulator
49		1	-	Distributor piece mini 4
50	◆ ★	2	9974166	O-ring
51		1	9904407	Locking screw R1/4
52	◆	1	9974217	Rod seal
53		1	9992816	Adhesive
54	◆	1	322439	Air motor noise insulation
55		1	9990861	Ribbed plug
56	◆	2	368313	Damper ISO1 and ISO2
57	◆	6	9971123	O-ring
58		1	9992590	Loctite 222 50 ml; 50 cc
59		1	9992831	Loctite 542 50 ml; 50 cc
60		1	9992616	Molykote DX grease
			2341627	Cobra 40-10 air motor service set

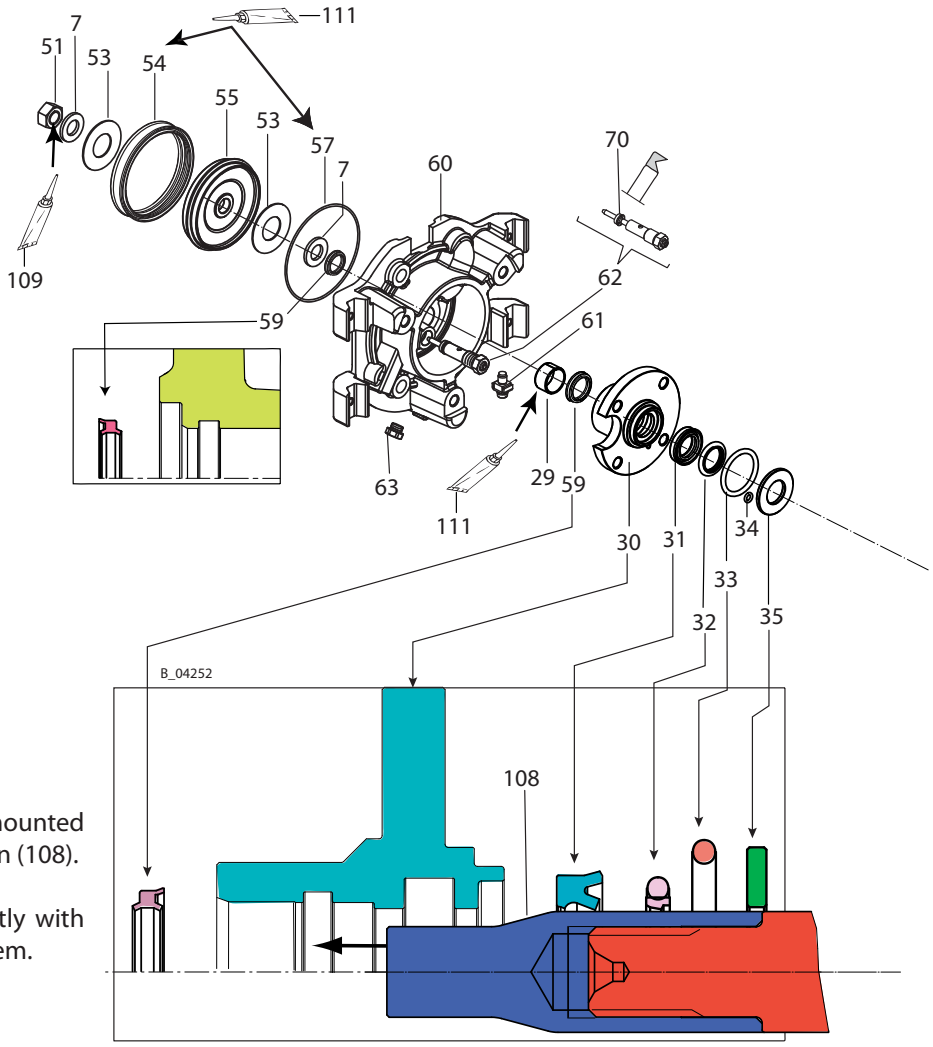
◆ = Wearing parts

★ = Included in service set

●= Not part of the standard equipment but available as a special accessory.



11.4 COBRA 40-10 FLUID SECTION



Notes:
The piston rod (25) may only be mounted with the screwed-on assembly pin (108).

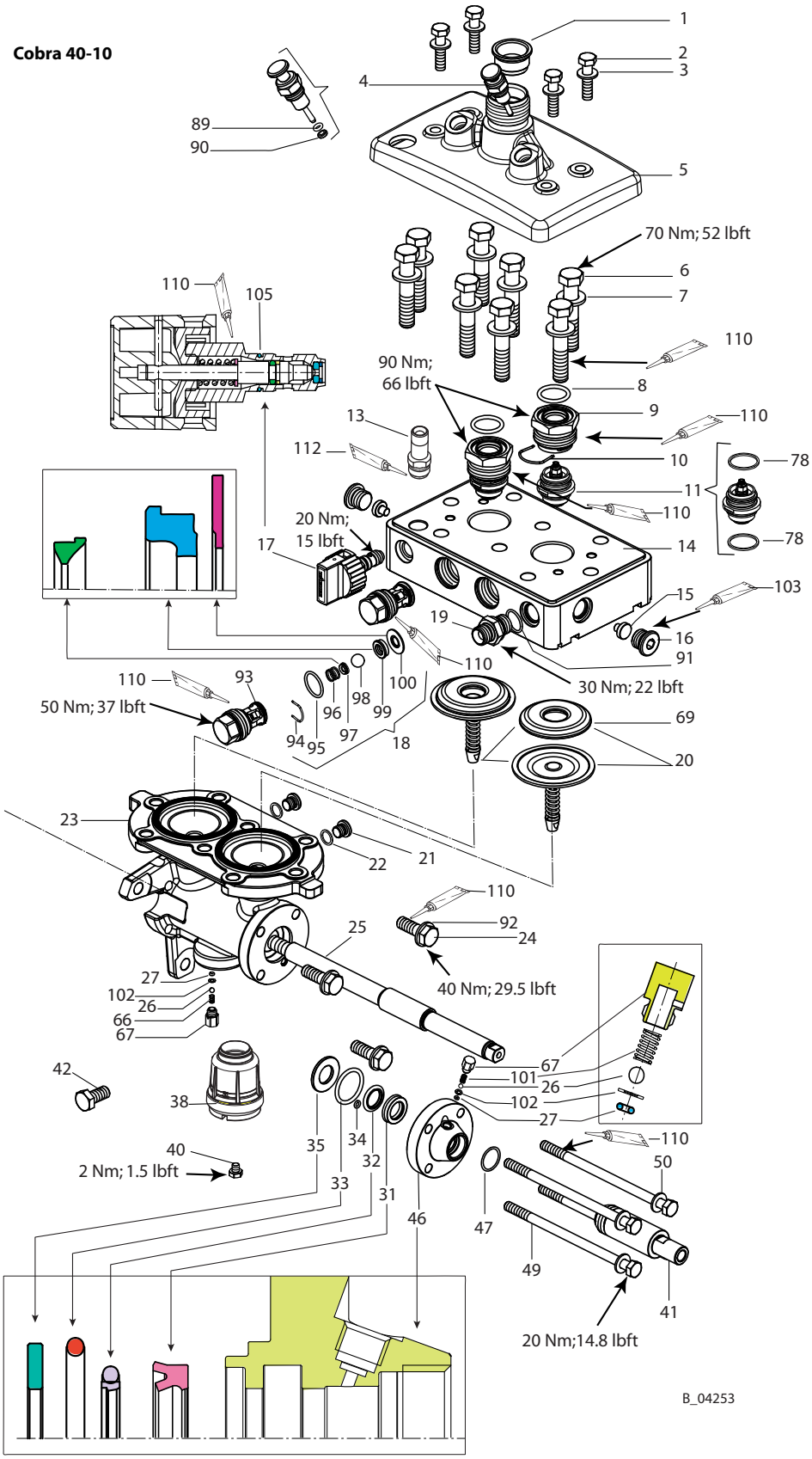
Grease all o-rings and seals lightly with grease (111) before mounting them.

Cobra 40-10 fluid section

Pos	K	Stk	Order No.	Designation
1		1	2329898	Sealing sleeve
2		4	9900204	Hexagon screw
3		4	9920102	Washer
4		2	341241	Inlet valve depressor, complete, see Chapter 11.10
5		1	2330764	Inlet housing

◆ = Wearing parts
★ = Included in the service set for Cobra 40-10 fluid section
●= Not part of the standard equipment but available as a special accessory.

Cobra 40-10


1
2
3
4
5
89
90
70 Nm; 52 lbft
6
7
110
105
90 Nm;
66 lbft
8
9
110
13
112
10
78
11
110
20 Nm;
15 lbft
17
14
78
15
103
19
16
91
110
30 Nm; 22 lbft
110
93
50 Nm; 37 lbft
94
95
96
97
98
99
100
18
69
20
23
22
21
110
92
24
25
40 Nm; 29.5 lbft
27
102
26
66
67
42
38
67
101
26
102
27
110
40
2 Nm; 1.5 lbft
35
34
32
33
31
46
47
50
49
41
20 Nm;14.8 lbft
B_04253

Cobra 40-10 fluid section

Pos	K	Stk	Order No.	Designation
6		8	9907234	Hexagon screw
7		10	9920107	Washer
8	◆ ★	2	9974184	O-ring
9		2	322411	Valve fitting
10		2	341336	Clasp
11	◆ ★	1	322914	Inlet valve set, complete (comprising 2 valves), see Chapter 11.9
13		1	2330810	Connection piece
14		1	322410	Fluid section
15		2	322412	Plug
16		2	9904311	Screw plug
17	◆	1	169248	Relief valve, complete, see Chapter 11.11
18	◆ ★	1	322915	Outlet valve set, complete (spare parts for 2 valves)
19		1	2330776	Fitting DF-MM-G3/8-3/8NPSM-530bar-SSt
20	◆ ★	1	322913	Complete diaphragm set with insert (comprising 2 diaphragms)
21		2	9904306	Screw plug
22	◆	2	9970127	Sealing ring
23		1	322401	Pressure stage D19/53
24		3	9907041	Hexagon screw
25		1	322402	Piston rod D19/53
26		2	9941502	Ball
27	◆	2	9971189	O-ring
29		1	9962028	Permaglide bushing
30		1	322403	Pressure stage flange
31	◆	2	9974182	Rod sealing profile BS
32	◆	2	9974183	Rod sealing set
33	◆	2	9974186	O-ring
34	◆	2	9971446	O-ring
35		2	322405	Pressure disk
36		1	2339250	Oil suction fitting
37	◆	1	115944	O-ring
38		1	2333498	Oil tank, complete
40		1	9998274	Threaded plug M7x1
41		1	322435	Piston cover
42		1	2334842	Pressure relief valve
46		1	322404	Pressure stage cover disk
47	◆	1	9974074	O-ring
49		4	9907233	Hexagon screw
50		4	9920102	Washer
51		1	9910101	Hexagon nut
53	◆	2	322427	Damping washer

◆ = Wearing parts

★ = Included in the service set for Cobra 40-10 fluid section

●= Not part of the standard equipment but available as a special accessory.

Cobra 40-10 fluid section

Pos	K	Stk	Order No.	Designation
54	◆	1	9974181	Piston sealing profile Z5
55		1	322426	Piston air motor 3
57	◆	1	9974115	O-ring
59	◆	2	9974185	Seal wiper ring, profile EM
60		1	322425	Air motor flange
61		1	367258	Grounding, complete
62	◆	1	369290	Pilot valve
63		1	9998675	Threaded plug
66		1	9998780	Pressure spring
67		2	322407	Oil valve screw
68	◆	3	9971162	O-ring
69		2	322415	Insert
70	◆	1	9974217	Rod seal
78	◆	4	341331	Sealing ring
89	◆ ★	2	9971486	O-ring (solvent-resistant)
90	◆	2	341316	Scraper
91	◆	1	9974112	Sealing ring
92		3	9920106	Washer
93		2	341325	Valve guide
94		2	341328	Clasp
95	◆	2	9971470	O-ring
96		2	341326	Pressure spring
97		2	253405	Spring support ring
98	◆	2	9941501	Ball 11 HM
99	◆	2	341327	Outlet valve seat
100	◆	2	341347	Sealing ring
101		1	9994237	Pressure spring
102	◆	2	322408	Oil valve pressure ring
103		1	9992590	Loctite 222 50 ml; 50 cc
104		1	9992831	Loctite 542 50 ml; 50 cc
105	◆ ★	1	9971395	O-ring 10x1.25
106		1	2312288	Service set for Cobra 40-10 fluid section
107		1	322917	Service set for Cobra 40-10 piston (incl. items 25, 31, 32, 33, 59, and 108)
108		1	322930	Piston rod assembly pin
109		1	9992511	Loctite 243 50 ml; 50 cc
110		1	9992616	Molykote DX grease
111		1	9998808	Mobilux EP 2 grease
112		1	9992528	Loctite 270 50 ml; 50 cc

◆ = Wearing parts

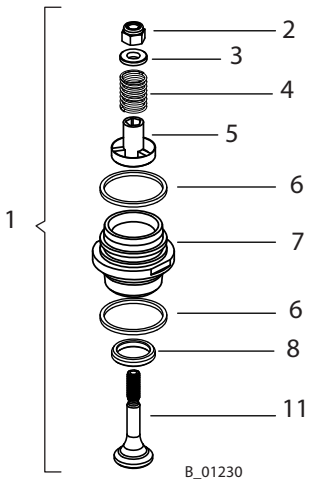
★ = Included in the service set for Cobra 40-10 fluid section

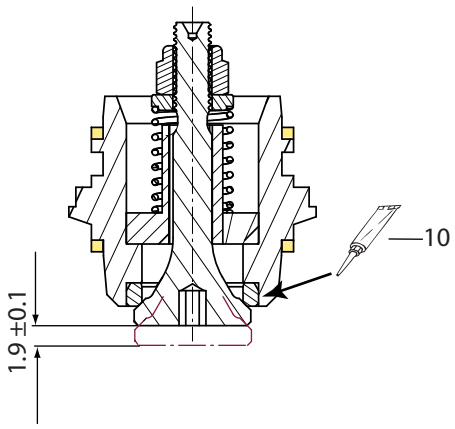
●= Not part of the standard equipment but available as a special accessory.

11.9 COBRA 40-10 INLET VALVE

Pos	K	Stk	Order No.	Designation
1	◆	1	322914	Complete Cobra 40-10 inlet valve set
2		2	9912100	Hexagon nut with clamp
3		2	344334	Spring guide
4		2	190304	Pressure spring
5		2	158333	Guide
6	◆	4	341331	Sealing ring
7		2	344322	Valve housing
8	◆	2	340346	Valve seat
10	◆	1	9992528	Loctite 270 50 ml; 50 cc
11		2	340342	Valve cone

◆ = Wearing parts



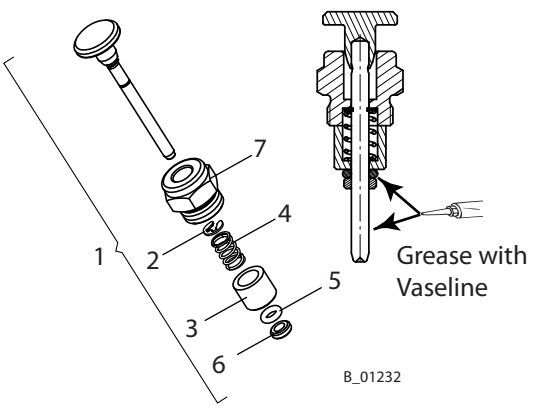


Note:
Item 8 -> adhesive area:
Pretreated with fast cleaner
Loctite type 7063.

11.10 INLET VALVE DEPRESSOR

Pos		Stk	Order No.	Designation
1		1	341241	Inlet valve depressor, complete
2		1	9922724	Lock washer 3.2
3		1	341377	Sleeve
4		1	9994275	Pressure spring
5	◆	1	9971486	O-ring 4x2
6	◆	1	341316	Scraper
7		1	341375	Screw plug

◆ = Wearing parts

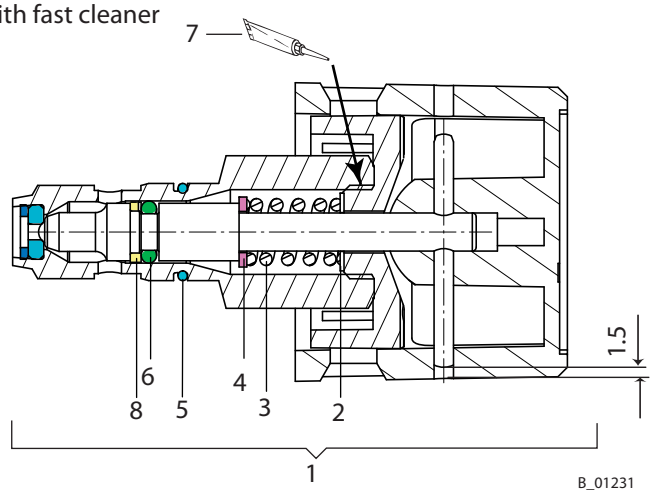


11.11 RELIEF VALVE

Pos	K	Stk	Order No.	Designation
1	◆	1	169248	Relief valve, complete
2		1	9920602	Adjusting washer
3		1	169346	Pressure spring
4		1	9920202	Washer
5	◆	1	9971395	O-ring 10x1.25
6	◆	1	9971486	O-ring 4x2
7		1	9992528	Loctite 270 50 ml; 50 cc
8	◆	1	9971367	Spiral baking ring 4.78x1.78

◆ = Wearing parts

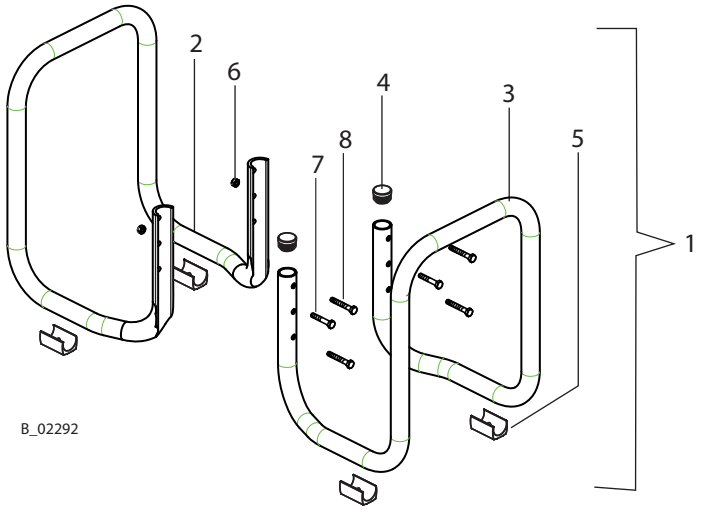
Thread: Pretreated with fast cleaner
Loctite type 7063.



11.12 COBRA 40-10 FRAME, COMPLETE

Pos	K	Stk	Order No.	Designation
1		1	322052	Base frame Cobra 40-10
2		1	322442	Base frame pressed
3		1	322443	Frame pipe
4		2	9990861	Plug
5	◆	4	9999209	Saddle feet for round tubes
6		2	9910204	Self-locking hexagon nut, M6
7		2	9900202	Hexagon screw M6x40
8		4	9900126	Hexagon screw M6x45

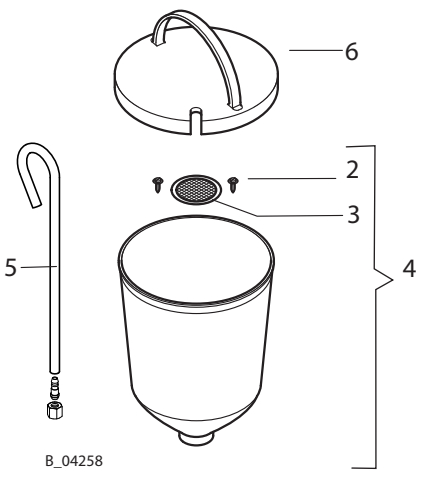
◆ = Wearing parts



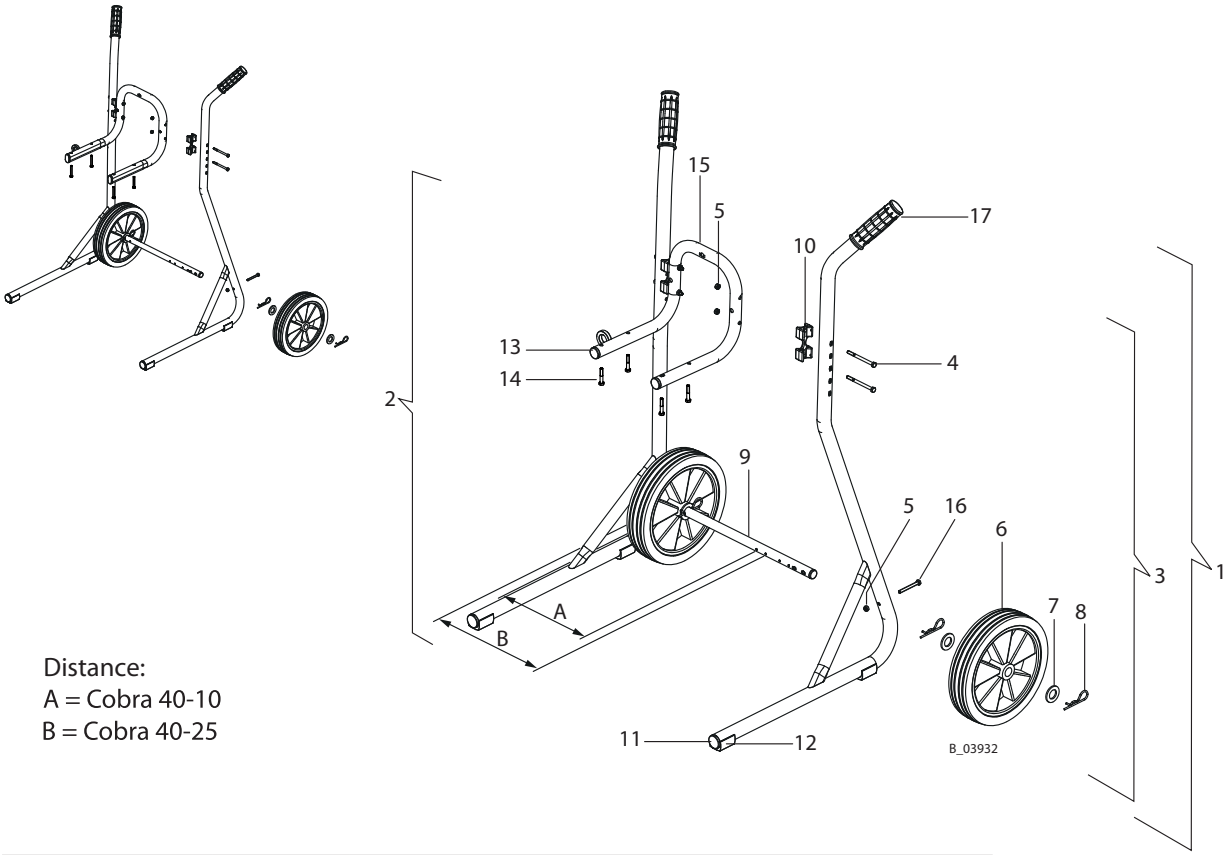
11.13 HOPPER, COMPLETE

Pos	K	Stk	Order No.	Designation
1	◆	1	341267	Hopper set Ex, 5 L; 1.3 gal
2		2	9902306	Combination tapping screw
3	◆	1	3756	Filter disk, mesh 0.4 mm; 0.02 inch
3a	◆	1	37607	Filter disk, mesh 0.8 mm; 0.03 inch
4	◆	1	340265	Hopper Ex
5	◆	1	2333163	Relief tube 5 L, complete
6	◆	1	340429	Cover

◆ = Wearing parts



11.14 TROLLEY



Distance:
A = Cobra 40-10
B = Cobra 40-25

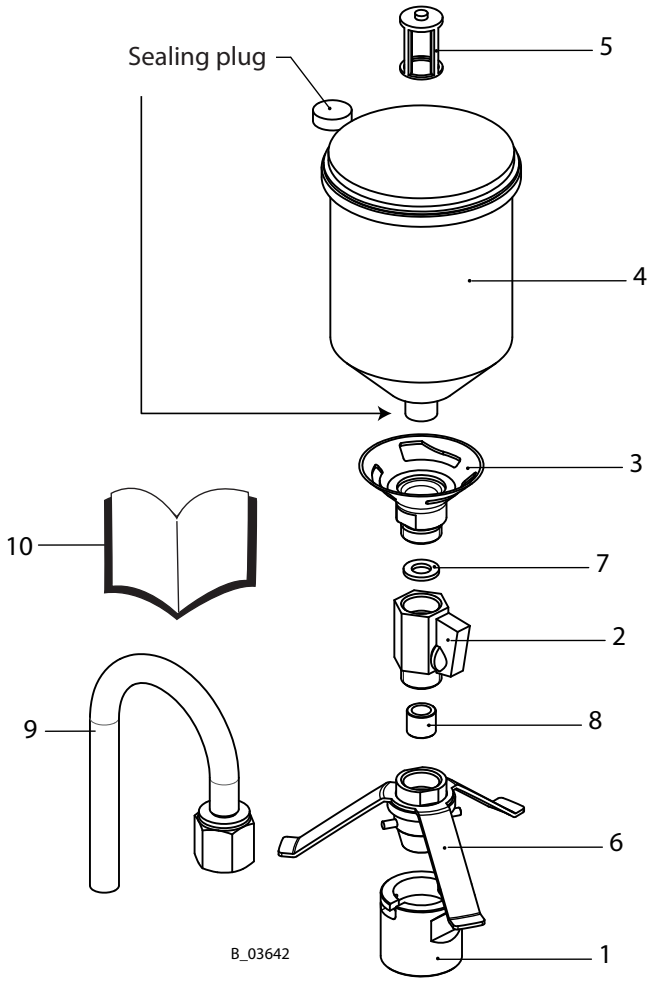
Pos	K	Stk	Order No.	Designation
1		1	2325901	Trolley, complete
2		1	--	Stand, left, 4"-6" (welded)
3		1	--	Stand, right, 4"-6" (welded)
4		4	9907140	Hexagon screw DIN931 M6x75
5		6	9910204	Self-locking hexagon nut, M6
6	◆	2	2304440	Wheel, D250
7		4	340372	Washer
8		4	9995302	Cotter pin
9		1	--	Wheel axle 4"-6"
10	◆	2	367943	Connecting part 4"-6"
11		2	--	Tube plug, ribbed
12		2	--	Saddle feet for round tubes
13		2	--	Plug
14		4	9900218	Hexagon screw
15		1	2332143	Wall mount
16		2	3061695	Hexagon screw without shaft M6x55
17	◆	2	9998747	Handle

◆ = Wearing parts

11.16 SMALL QUANTITY CUP

Pos	K	Stk	Order No.	Designation
		1	2321424	Small quantity cup
1		1	2320844	Union nut with bayonet
2	◆	1	2321426	Low-pressure mini ball valve G1/2
3	◆	1	2320841	Gravity feed cup adapter HSM
4	◆	2	2321427	Gravity feed cup SPA easy line TA
5	◆	2	2321676	Sieve insert SPA easy line
6		1	2320888	Cone connector preassembled
7	◆	1	2320870	Sealing washer
8	◆	1	2320922	Sealing sleeve
9	◆	1	2322857	Relief tube 0.5 L, complete
10		1	2322671	Assembly manual

◆ = Wearing parts



12 3+2 YEARS GUARANTEE FOR PROFESSIONAL FINISHING

12.1 SCOPE OF GUARANTEE

All Wagner professional colour application devices (hereafter referred to as products) are carefully inspected, tested, and subject to strict checks under Wagner quality assurance. Wagner exclusively issues extended guarantees to commercial or professional users (hereafter referred to as "customer") who have purchased the product in an authorized specialist shop, and which relate to the products listed on the Internet at www.wagner-group.com/profi-guarantee.
The buyer's claim for liability for defects from the purchase agreement with the seller and statutory rights are not impaired by this guarantee.
We provide a guarantee in that we decide whether to replace or repair the product or individual parts, or take the device back and reimburse the purchase price. The costs for products and working hours are our responsibility. Replaced products or parts become our property.

12.2 GUARANTEE PERIOD AND REGISTRATION

The guarantee period amounts to 36 months. For industrial use or equal wear, such as shift operations in particular, or in the event of rentals, it amounts to 12 months.
Systems driven by petrol or air are also guaranteed for a 12 month period.
The guarantee period begins with the day of delivery by the authorized specialist shop. The date on the original purchase document is authoritative.
For all products bought in authorized specialist shops from 2009-02-01 the guarantee period is extended to 24 months providing the buyer of these devices registers in accordance with the following conditions within 4 weeks of the day of delivery by the authorized specialist shop.
Registration can be completed on the Internet at www.wagner-group.com/profi-guarantee
The guarantee certificate is valid as confirmation, as is the original purchase document that carries the date of the purchase. Registration is only possible if the buyer agrees to the data that is entered during registration being stored.
When services are carried out under guarantee the guarantee period for the product is neither extended nor renewed.
Once the guarantee period has expired, claims made against the guarantee or from the guarantee can no longer be enforced.

12.3 HANDLING

If defects can be seen in the materials, processing, or performance of the device during the guarantee period, guarantee claims must be made immediately, or at the latest within a period of 2 weeks.
The authorized specialist shop that delivered the device is entitled to accept guarantee claims. Guarantee claims may also be made to the service centers named in the operating manual. The product has to be sent without charge or presented together with the original purchase document that includes details of the purchase date and the name of the product. In order to claim for an extension to the guarantee, the guarantee certificate must be included.
The costs as well as the risk of loss or damage to the product in transit or by the center that accepts the guarantee claims or who delivers the repaired product, are the responsibility of the customer.

12.4 EXCLUSION OF GUARANTEE

Guarantee claims cannot be considered
- for parts that are subject to wear and tear due to use or other natural wear and tear, as well as defects in the product that are a result of natural wear and tear, or wear and tear due to use. This includes in particular cables, valves, packings, nozzles, cylinders, pistons, means-carrying housing components, filters, pipes, seals, rotors, stators, etc. Damage due to wear and tear that is caused in particular by sanded coating products, such as dispersions, plasters, putties, adhesives, glazes, quartz foundation.
- in the event of errors in devices that are due to non-compliance with the operating instructions, unsuitable or unprofessional use, incorrect assembling and/or commissioning by the buyer or by a third party, utilization other than is intended, abnormal ambient conditions, unsuitable coating products, the influence of chemical, electrochemical, or electrical agents, unsuitable operating conditions, operation with the incorrect mains voltage supply/frequency, overload, or defective servicing or care and/or cleaning.
- for errors in the device that have been caused by using accessory parts, additional components, or spare parts that are not original Wagner parts.
- for products to which modifications or additions have been carried out.
- for products where the serial number has been removed or is illegible.
- for products to which attempts at repairs have been carried out by unauthorized persons.
- for products with slight deviations from the target properties, which are negligible with regard to the value and usability of the device.
- for products that have been partially or fully taken apart.

12.5 ADDITIONAL REGULATIONS

The above guarantees apply exclusively to products that have been bought from authorized specialist shops in the EU, CIS, Australia and are used within the reference country.

If an inspection finds damage not covered by the present guarantee, repairs are carried out at the expense of the buyer.
The above regulations manage the legal relationship to us concludingly. Additional claims, in particular for damages and losses of any type, which occur as a result of the product or its use, are excluded from the product liability act except with regard to the area of application.
Claims for liability for defects to the specialist trader remain unaffected.
German law applies to this guarantee. The contractual language is German. In the event that the meaning of the German and a foreign text of this guarantee deviate from one another, the meaning of the German text has priority.

J. Wagner GmbH
Professional Finishing Division
Otto Lilienthal Strasse 18
88677 Markdorf
Germany

Wagner professional guarantee
(As of 2009-02-01)

12.3 CE DECLARATION OF CONFORMITY

We hereby declare that the supplied version of diaphragm pumps and spray packs:

Cobra 40-10

CE

complies with the following guidelines:

2006/42/EC
94/9/EC (ATEX Directive)

Applied standards, in particular:

DIN EN ISO 12100: 2011	DIN EN 1127-1: 2011
DIN EN ISO 4413: 2011	DIN EN 13463-1: 2009
DIN EN ISO 4414: 2011	DIN EN 13463-5: 2011
DIN EN 809: 2012	DIN EN ISO 13732-1: 2008
DIN EN 12621: 2011	DIN EN 14462: 2010

Applied national technical standards and specifications, in particular:

BGR 500 Part 2 Chapter 2.29 and Chapter 2.36	TRBS 2153

Identification:

CE Ex II 2G IIB c X

CE Certificate of Conformity
The CE certificate of conformity is enclosed with this product. If needed, further copies can be ordered through your WAGNER dealer by specifying the product name and serial number.
Order number: 2302350

Service Network in Germany

Berlin
J. Wagner GmbH
Service-Stützpunkt
Flottenstraße 28–42
13407 Berlin
Tel. 0 30/ 41 10 93 86
Fax 0 30 / 41 10 93 87

Grünstadt
J. Wagner GmbH
Service-Stützpunkt
Dieselstraße 1
67269 Grünstadt
Tel.: +49 (0) 63 59/ 87 27 55 0
Fax: +49 (0) 63 59/ 80 74 80

Ratingen
J. Wagner GmbH
Service-Stützpunkt
Siemensstraße 6-10
40885 Ratingen
Tel.: +49 (0) 21 02 / 3 10 37
Fax: +49 (0) 21 02 / 3 43 95

Heidersdorf in Sachsen
J. Wagner GmbH
Service-Stützpunkt
Olbernhauer Straße 11
09526 Heidersdorf
Tel.: +49 (0)3 73 61 / 1 57 07
Fax: +49 (0)3 73 61 / 1 57 08

Stuttgart
J. Wagner GmbH
Service-Stützpunkt
In der Steige 6/1
72564 Neckartenzlingen
Tel. 0 71 27 / 30 74
Fax 0 71 27 / 30 75

Munich
Jahnke GmbH
Hochstraße 7
82024 Taufkirchen
Tel:. +49 (0) 89 /6 14 00 22
Fax: +49 (0) 89 / 6 14 04 33
email: info@airless.de
www.airless.de

Nuremberg
Grimmer GmbH
Starenweg 28
91126 Schwabach
Tel.: +49 (0) 91 22 / 7 94 73
Fax: +49 (0) 91 22 / 7 94 75 0
email: info@grimmer-sc.de
www.grimmer-sc.de

Hannover
J. Wagner GmbH
Service-Stützpunkt
Kornstraße 20
31535 Neustadt
Tel.: +49 (0) 50 32-8 00 06 23
Fax: +49 (0) 50 32-8 00 06 24

Markdorf – Headquarters

J. WAGNER GmbH
Otto-Lilienthal-Straße 18
88677 Markdorf
Postfach 11 20
88669 Markdorf
Tel.: +49 (0) 75 44 / 505-0
Fax: +49 (0) 75 44 / 505-1200
www.wagner-group.com

Customer Center
Tel.: +49 (0) 75 44 / 505-1664
Fax: +49 (0) 75 44 / 505-1155
E-mail:
kundenzentrum@wagner-group.com

Technical Service
Tel.: +49 (0)180 5 59 24 637
(14 cents/minute when calling from the German
landline network; mobile charge no more than 42 cents/min.)

WAGNER CONTACT NETWORK GERMANY; AVAILABLE ON THE INTERNET AT:
WWW.WAGNER-GROUP.COM/PROFI

WAGNER

A J. Wagner Ges.m.b.H.
Ottogasse 2/20
2333 Leopoldsdorf
Österreich
Tel. +43/ 2235 / 44 158
Fax +43/ 2235 / 44 163
office@wagner-group.at

B Wagner Spraytech Benelux b.v.
Veilinglaan 56-58
1861 Meise-Wolvertem
Belgium
Tel. +32/2/269 46 75
Fax +32/2/269 78 45
info@wagner-wsb.nl

CH J. Wagner AG
Industriestrasse 22
9450 Altstätten
Schweiz
Tel. +41/71 / 7 57 22 11
Fax +41/71 / 7 57 22 22
wagner@wagner-group.ch

D J. Wagner GmbH
Otto-Lilienthal-Straße 18
D-88677 Markdorf
Postfach 11 20
D-88669 Markdorf
Deutschland
Tel.: +49 (0) 75 44 / 505 -1664
Fax: +49 / 75 44 / 505 -1155
wagner@wagner-group.com
www.wagner-group.com

DK Wagner Spraytech
Scandinavia A/S
Helgeshøj Allé 28
2630 Taastrup
Denmark
Tel. +45/43/ 27 18 18
Fax +45/43/ 43 05 28
wagner@wagner-group.dk

E Wagner Spraytech Iberica S.A.
P.O. Box 132, Crta. N-340
08750 Molins de Rey
Barcelona / Espania
Tel. +34/93/6800028
Fax +34/93/66800555
info@wagnerspain.com

F Wagner France S.a.r.l
12 Avenue des Tropiques
Z.A. de Courtaboeuf
91978 Les Ulis Cedex
France
Tel. 0 825 011 111
Fax +33 (0) 1 69 81 72 57
division.batiment@wagner-france.fr

CZ Wagner, spol. s r.o.
Nedasovská str. 345
155 21 Praha 5 -Zlicín
Czechia
Tel. +42/ 2 / 579 50 412
Fax +42/ 2 / 579 51 052
info@wagner.cz

GB Wagner Spraytech (UK) Limited
The Coach House
2 Main Road
Middleton Cheney OX17 2ND
Great Britain
UK-Helpline 01295 714200
Fax 01295 710100
enquiries@wagnerspraytech.co.uk

I Wagner Colora S.r.l
Via Italia, 34
I- 20060 Gessate (MI)
Italia
Tel. +39/ 02 959292 1
Fax +39/ 02 95780187
info@wagnercolora.com

NL Wagner Spraytech Benelux b.v.
De Heldinnenlaan 200,
3543 MB Utrecht
Netherlands
Tel. +31/ 30/241 41 55
Fax +31/ 30/241 17 87
info@wagner-wsb.nl

S Wagner Spraytech
Scandinavia A/S
Helgeshøj Allé 28
2630 Taastrup
Denmark
Tel. +45/43/ 21 18 18
Fax +45/43/ 43 05 28
wagner@wagner-group.dk

www.wagner-group.com

Subject to changes and errors.